

# **Status Report on Technical Studies for the Storage and Conveyance Refinement Process**

**DWRSIM AND DSM2 MODELING STUDIES OF  
CALFED ALTERNATIVES AND ERPP WATER  
ACQUISITIONS**

**PRELIMINARY DRAFT**  
**May 19, 1998**



# System Modeling Studies of CALFED Alternatives

## Preliminary Results of System/Delta Modeling Using DWRSIM and DSM2

### CONTENTS

#### OVERVIEW OF RESULTS

Introduction.....	1
Summary of Results.....	1

#### APPENDICES "A" - "D" - DWRSIM MONTHLY/ANNUAL AVERAGE GRAPHS

##### *Program Alternative Cases*

**Appendix A** - 1922-94 Comparison of Existing Conditions (558), No Action (516), Alternative 1C with Storage (531), Alternative 2B with Storage (532), Alternative 3X – 10,000 cfs Isolated Facility and Storage (567), and Alternative 3E – 15,000 cfs Isolated Facility without Storage (551)

**Appendix B** - 1928-34 Comparison of Existing Conditions (558), No Action (516), Alternative 1C with Storage (531), Alternative 2B with Storage (532), Alternative 3X – 10,000 cfs Isolated Facility and Storage (567), and Alternative 3E – 15,000 cfs Isolated Facility without Storage (551)

**Appendix C** - 1976-91 Comparison of Existing Conditions (558), No Action (516), Alternative 1C with Storage (531), Alternative 2B with Storage (532), Alternative 3X – 10,000 cfs Isolated Facility and Storage (567), and Alternative 3E – 15,000 cfs Isolated Facility without Storage (551)

**Appendix D** – 1976-91 (*Dry & Critical water years only*) Comparison of Existing Conditions (558), No Action (516), Alternative 1C with Storage (531), Alternative 2B with Storage (532), Alternative 3X – 10,000 cfs Isolated Facility and Storage (567), and Alternative 3E – 15,000 cfs Isolated Facility without Storage (551)

##### *Appendix Information/Location Results*

Total Delta Exports  
Total Delta Outflow  
Total Delta Inflow  
X2 Position  
Sacramento River Flow at Freeport  
Total Exports from South Delta Channel

## **APPENDIX "E" – ERPP FLOW ACQUISITIONS AND AFFECTS ON SYSTEM PARAMETERS**

**Appendix E** – Provides a series of Data Tables for Critical, Dry, Below Normal, Above Normal, and Wet Water Years evaluated for the following parameters:

Summary Table of ERPP Modeling Results

Total Outflow with ERPP flow targets (Study 518)

Total ERPP Acquisitions

Monthly ERPP Water Acquisitions for:

- Sacramento River Basin and San Joaquin River Basin
- Sacramento River and Feather River
- Yuba River and American River
- Lower Sacramento River below Freeport and Lower Sacramento above Hood
- Stanislaus River and Tuolumne River
- Merced River

## **APPENDICES "F" AND "G" – DSM2 MONTHLY/ANNUAL AVERAGE GRAPHS**

### ***Program Alternative Cases***

**Appendix F** - 1976-91 Comparison of Existing Conditions (558), No Action (516), Alternative 1C with Storage (531), Alternative 2B with Storage (532), Alternative 3X – 10,000 cfs Isolated Facility and Storage (567), and Alternative 3E – 15,000 cfs Isolated Facility without Storage (551)

**Appendix G** – 1976-91 (*Dry & Critical water years only*) Comparison of Existing Conditions (558), No Action (516), Alternative 1C with Storage (531), Alternative 2B with Storage (532), Alternative 3X – 10,000 cfs Isolated Facility and Storage (567), and Alternative 3E – 15,000 cfs Isolated Facility without Storage (551)

### ***Appendix Information/Location Results***

Sacramento River at Greens Landing

Cross Delta Flow (Georgiana, Delta Cross Channel, Snodgrass/Alt. 2 Discharge)

Sacramento River at Rio Vista

Georgiana Slough

North Fork Mokelumne River

South Fork Mokelumne River

San Joaquin River at Brandt Bridge

San Joaquin River at Stockton

Middle River at Tracy Road

Middle River at Bacon Island

Old River at Head

Old River at Bacon Island

Qwest (San Joaquin River, False River, Dutch Slough, Sevenmile Slough)

San Joaquin River at Antioch

**System Modeling Studies of CALFED Alternatives**  
**Preliminary Results/Evaluation of System Modeling with DWRSIM**

## **OVERVIEW OF EVALUATION**

### **INTRODUCTION**

System and Delta modeling for the CALFED storage and conveyance refinement process provide information regarding environmental consequences of the CALFED Program Alternatives. System modeling was conducted with the DWRSIM model and Delta hydrodynamic modeling was conducted with DSM2. The "CALFED Bay-Delta Program System Operation Modeling Plan" dated August 21, 1997, outlines the modeling assumptions used in the DWRSIM studies. A more detailed description of study assumptions is available on the Department of Water Resources Hydrology and Operations Section Home Page at: <http://wwwhydro.water.ca.gov/index.html>.

Documented in this preliminary report, a series of DWRSIM and DSM-2 modeling studies were summarized into seven technical appendices. The included Appendices A through D summarize hydrology results from a series of DWRSIM system operation studies, and Appendices F and G summarize results for a series of DSM-2 hydrology studies. Appendix E provides summary tables of ERPP flow acquisitions at various locations. The basic operation assumptions for each study are outlined below.

### **SYSTEM OPERATION MODELING RESULTS (DWRSIM)**

Appendices A through D represent hydrology results from DWRSIM studies 558, 516, 531, 532, 567, 551 representing Existing Conditions, No Action, and Alternative 1C, 2B, 3X, and 3E, which were used as hydrologies for the DSM2 hydrodynamic evaluations. Each Appendix provides a series of graphs of Monthly Average Values evaluated over 4 distinct time periods at 5 different system locations.

Results are shown for the following hydrologic time periods:

- 1922-1994
- 1928-1934
- 1976-1991
- 1976-1991 with Dry/Critical Years only

Results are evaluated for the following system locations:

1. Total Delta Exports
2. Total Delta Outflow
3. Total Delta Inflow
4. X2 Position
5. Sacramento River Flow at Freeport
6. Total Exports from South Delta Channel

DWRSIM uses the Kimmerer-Monismith monthly equation time steps to determine the quantity of Delta outflow required to meet X2 requirements under assumed Bay-Delta standards. The same equation is used to estimate the resultant X2 location after all operations are set in each monthly time step. The location of X2 is also available as DSM2 output; however, because the hydrodynamic results are not fed back into the system operations interactively, the resulting depiction of X2 is not reflective of real-time operations. The hydrodynamic results do not operate system hydrology due to Delta operation constraints and is therefore a more inaccurate depiction of X2 under real-time system operations.

Appendix E represents ERPP flows and system operation changes between DWRSIM studies 517 (without ERPP flow) and 518 (with ERPP flow) providing the basis for ERPP water acquisitions from willing sellers. The Appendix provides a summary table and a set of time series tables providing monthly data on ERPP water acquisitions by location grouped for comparison as follows:

1. Total Outflow with ERPP flow targets (Study 518) and  
Total ERPP Acquisitions
2. Monthly ERPP Water Acquisitions for:  
Sacramento River Basin and San Joaquin River Basin  
Sacramento River and Feather River  
Yuba River and American River  
Lower Sacramento River below Freeport and Lower Sacramento above Hood  
Stanislaus River and Tuolumne River  
Merced River

#### **Study Descriptions/Assumptions**

**Study 558** (CALFED Existing Conditions) meets requirements established by the 1995 WQCP Delta Standards and incorporates 1995-Level hydrology. Total SWP demand varies from 2.6 MAF to 3.6 MAF/year and Total CVP demand is 3.3 MAF/year. Stanislaus River required minimum fish flows below New Melones Reservoir range from 98 TAF/year up to 467 TAF/year. The actual minimum fish flow for each year is based on the water supply available for that year. CVP contract demands above Goodwin Dam are met as a function of New Melones Reservoir storage and inflow per interim Operations Plan provided by the USBR. Additional CVPIA (b)(2) AFRP flow action on the Stanislaus River below Goodwin Dam and additional CVPIA (b)(2) water management Delta actions are also included, which provide operation criteria at Vernalis. The Vernalis Adaptive Management Plan (VAMP) increases the flow at Vernalis to meet the target flow conditions during April 15-May 15 and sets Delta exports as described in the July 9th VAMP framework document. Additional water needed to meet the target flow at Vernalis during April 15 - May 15 is provided from the San Joaquin River upstream of its confluence with the Stanislaus River. Additional water requirements are shared between the Tuolumne (New Don Pedro Reservoir) and Merced (Lake McClure) River basins. The additional water is capped at 100 TAF/year.

**Study 516** (CALFED No Action) satisfies requirements under benchmark Study 514 which meets SWRCB'S May 1995 Water Quality Control Plan and includes selected upstream ESA requirements and CVPIA AFRP flow prescriptions . This Study also incorporates 2020 level of hydrology, 2020

level of South-of-Delta SWP variable demands, and the current Stanislaus Operation. In addition, Study 516 includes CVPIA (b)(2) AFRP flow action on the Stanislaus River below Goodwin Dam and additional CVPIA (b)(2) water management Delta actions. CVPIA (b)(2) water management Delta actions from the CVPIA PEIS Administrative Draft Report indicates that total CVP/SWP exports are restricted during the 30-day pulse flow period from April 15 through May 15 to the following ratios of total export to flow at Vernalis for the following year types: 1) 1:3 below normal, dry, and critical years, 2) 1:4 above normal years and 1:5 wet years. Delta Cross Channel is closed during the period from November through June, and is open during the period from July through October. Additional Chippis Island X2 days required to approximate a 1962 Level of Development are assumed.

**Study 517** (CALFED Alternative 1 without ERPP) meets the requirements under Study 516 and includes a surrogate CVP demand as follows:

- Unmet CVP demands from Study 516 (maximum annual capped at 500 TAF) are imposed as additional demand on the SWP system.
- CVP water is wheeled through Banks Pumping Plant to meet unmet demands and to fill San Luis Reservoir when capacity is available.

**Study 518** (CALFED Alternative 1 with Surrogate Demand and ERPP) meets the requirements under Study 516 and includes a surrogate CVP demand under Study 517 and ERPP flow targets as follows:

- Ecosystem Restoration Program Plan (ERPP) flow targets are assumed as specified in CALFED System Operation Modeling Plan Report dated August 21, 1997.
- ERPP water for instream flows and Delta outflow targets are available only for environmental uses.
- Implementation of ERPP targets will not impact the project operations. ERPP flows are added to the system in each monthly time step, after simulation of SWP and CVP operations. Shortfalls in ERPP flow are made up through an "add water" function, to simulate acquisitions from willing sellers.

**Study 531** (CALFED Alternative 1C with Storage) meets requirements under Study 518 with additional modifications. Facilities can operate Banks Pumping Plant at a capacity of 10,300 cfs. Additional storage of 4.75 MAF is also included, composed of 3.0 MAF North of Delta Surface Storage, 1.0 MAF South of Delta surface Storage, 0.25 MAF North of Delta Groundwater Storage, and 0.50 MAF South of Delta Groundwater Storage. 3.75 MAF of the additional storage is designated as CVP/SWP Storage and 1.0 MAF is allocated for environmental purposes. There is a 60,000 cfs geomorphologic flow trigger for Sacramento River diversion into North of Delta Surface Storage (NDSS) and North of Delta Environmental Storage (NDES).

**Study 532** (CALFED Alternative 2B with Storage) meets requirements under Study 518 with additional modifications. **Study 532** (CALFED Alternative 2 with Storage) meets requirements under Study 518

with additional modifications. Facilities are required to operate Banks Pumping Plant at a capacity of 10,300 cfs. Additional storage of 6.0 MAF is also included, composed of 3.0 MAF North of Delta Surface Storage, 2.0 MAF South of Delta surface Storage, 0.25 MAF San Joaquin Surface Storage, 0.25 MAF North of Delta Groundwater Storage, and 0.50 MAF South of Delta Groundwater Storage. 4.75 MAF of the additional storage is designated as CVP/SWP Storage and 1.0 MAF is allocated for environmental purposes. There is a 60,000 cfs geomorphologic flow trigger for Sacramento River diversion into North of Delta Surface Storage (NDSS) and North of Delta Environmental Storage (NDES).

**Study 567** (CALFED Alternative 3X with 10K IF including Storage) Export Limits are based on the WQCP with Export/Inflow Ratios of 35% during October through January, 35%-45% during February, 35% for March through June, and 65% for July through September. Flows at Vernalis are based on CVPIA (b)(2) water management Delta actions indicating that total CVP/SWP exports are restricted during the 30-day pulse flow period from April 15 through May 15 to the following ratios of total export to flow at Vernalis for the following year types: 1) 1,500 cfs or 1:3 for below normal, dry, and critical years, 2) 1:4 for above normal years, and 1:5 for wet years. X2 position is based on CVPIA (b)(2) action, and additional Chipps Island X2 days in May and June are required to approximate a 1962 Level of Development as described in Table III-14 (Page III-29) PEIS Administrative Draft. Minimum outflow requirements are based on the WQCP and NDOI (cfs) are set at 3,000-4,000 cfs in October, 3,500-4,500 cfs from November through December, 4,500 cfs in January, 4,000-8,000 cfs in July, 3,000-4,000 cfs in August, and 3,000 cfs in September.

Facilities can operate Banks Pumping Plant at a capacity of 10,300 cfs. Additional storage of 6.2 MAF is also included, composed of 3.0 MAF North of Delta Surface Storage, 2.0 MAF South of Delta surface Storage, 0.25 MAF San Joaquin Surface Storage, 0.25 MAF In-Delta Surface Storage, 0.25 MAF North of Delta Groundwater Storage, and 0.50 MAF South of Delta Groundwater Storage. 4.75 MAF of the additional storage is designated as CVP/SWP Storage and 1.0 MAF is allocated for environmental purposes. There is no geomorphologic flow trigger for Sacramento River diversion into North of Delta Surface Storage (NDSS) and North of Delta Environmental Storage (NDES).

**Study 551** (CALFED Alternative 3E – 15K I.F. without storage) meets the Delta operation requirements under Study 567, except for Level II Delta AG delivered from If, no additional system storage and the I.F. maximum capacity is 15,000 cfs.

## DELTA MODELING RESULTS (DSM-2)

Appendices F and G summarizes hydrology results based on Studies 558, 516, 531, 532, 551, and 567, which represent Existing Conditions (1EX), No Action (1A), Alternatives 1C, 2B with Storage, Alternative 3E with a 15K IF without Storage, and Alternative 3X with a 10K IF with Storage, respectively. Appendices F and G provide a series of graphs of Monthly Average Values evaluated at 14 different system locations and over hydrologic periods from 1976-1991 and 1976-1991 for Dry/Critical water years.

Results are shown for the following hydrologic time periods:

- 1976-1991
- 1976-1991 with Dry/Critical Years only

Results are evaluated for the following system locations:

1. Sacramento River at Greens Landing
2. Cross Delta Flow (Georgiana, Delta Cross Channel, Snodgrass/Alt. 2 Discharge)
3. Sacramento River at Rio Vista
4. Georgiana Slough
5. North Fork Mokelumne River
6. South Fork Mokelumne River
7. San Joaquin River at Brandt Bridge
8. San Joaquin River at Stockton
9. Middle River at Tracy Road
10. Middle River at Bacon Island
11. Old River at Head
12. Old River at Bacon Island
13. Qwest (San Joaquin River, False River, Dutch Slough, Sevenmile Slough)
14. San Joaquin River at Antioch

#### **Study Descriptions/Assumptions**

*Alternative 1EX* (CALFED Existing Conditions) assumes the existing Delta geometry with no change to any Delta channels or structures. No temporary structures in the south Delta or fish control structure at the head of Old River are installed. The hydrology used for evaluating Delta impacts for this study came from DWRSIM Study 558 (described above).

*Alternative 1A* (CALFED No Action) assumes the existing Delta geometry with no change to any Delta channels or structures. No temporary structures in the south Delta or fish control structure at the head of Old River are installed. The hydrology used for evaluating Delta impacts for this study came from DWRSIM Study 516 (described above).

*Alternative 1C* assumes Delta changes consistent with the preferred alternative for the Interim South Delta Program Draft Environmental Statement / Environmental Report, July 1996. A new forebay intake structure with 30,000 cfs capacity is installed in the northeast section of the forebay. Old River from Victoria Canal to Woodward Canal is dredged. Permanent flow control structures are installed in Old River, Middle River, and Grant Line Canal. A permanent fish control structure is installed at the head of Old River. The Tracy Pumping Plant is connected to Clifton Court Forebay through an intertie. The hydrology used for evaluating Delta impacts for this study came from DWRSIM Study 531. Study 531 meets the requirements under Study 609 (described above), but does not include geomorphology diversion criteria.

**Alternative 2B** includes the development of North Delta improvements, a 10,000 cfs screened Hood intake, and South Delta improvements. It assumes the same changes in the south Delta as described under Alternative 1C. In addition, up to 10,000 cfs of Sacramento River water is diverted from Hood to Snodgrass Slough while McCormack-Williamson Tract is flooded and channels in the Mokelumne River system are enlarged to accommodate the increased cross-Delta flow.

A 10,000 cfs pumping plant at Hood and a 10,000 cfs open channel from Hood to Lambert Road are assumed. Snodgrass Slough is enlarged by a 1,000 foot levee setback in the southwest corner of Glanville Tract. The flow down Snodgrass Slough is then allowed to pass through a flooded McCormack-Williamson Tract at levee openings in the northwest, the southwest, and the northeast corners of the island.

The Mokelumne River is widened 500 feet by levee setback in three reaches: from I-5 to New Hope Landing, the North Fork of the Mokelumne River from New Hope Landing to the south end of Tyler Island, and the lower Molelumne River on the western portion of Bouldin Island.

The hydrology used for evaluating Delta impacts under Alternative 2B came from DWRSIM Study 532. Study 532 meets the requirements under Study 532a (described above), but does not include geomorphology diversion criteria.

**Alternative 3E** includes a 15,000 cfs isolated facility with a diversion pump on the Sacramento River near Hood. Channel enlargements in the Mokelumne system and Clifton Court improvements are the same as in Alternatives 2B and 3X. A fish control structure at the Head of Old River is assumed to be installed and operating. This alternative is a modified version of the original alternative 3E because it provides irrigation water via pumps to service areas along the route of the isolated facility. The hydrology used for evaluating Delta impacts under Alternative 3E came from DWRSIM Study 551 (described above).

**Alternative 3X** includes a 10,000 cfs isolated facility with a diversion pump on the Sacramento River near Hood. Channel enlargements in the Mokelumne system and Clifton Court Forebay improvements are the same as in Alternatives 2B and 3E. In addition, Alternative 3X uses Bacon, Woodward, and Victoria islands as an in-Delta storage component. The islands are used as reservoirs, storing water pumped into Bacon Island at its northeast corner. In-Delta storage is later released to Clifton Court Forebay directly to help meet Banks and Tracy pumping demands. Delta water is also diverted into Clifton Court Forebay through new intake gates located on the northeast corner of the forebay. Alternative 3X also includes the south Delta flow control and fish control structures described in 1C and 2B. The hydrology used for evaluating Delta impacts came from DWRSIM Study 567 (described above).

## **APPENDIX A**

**1922 – 1994**

### **DWRSIM AVERAGE MONTHLY VALUES**

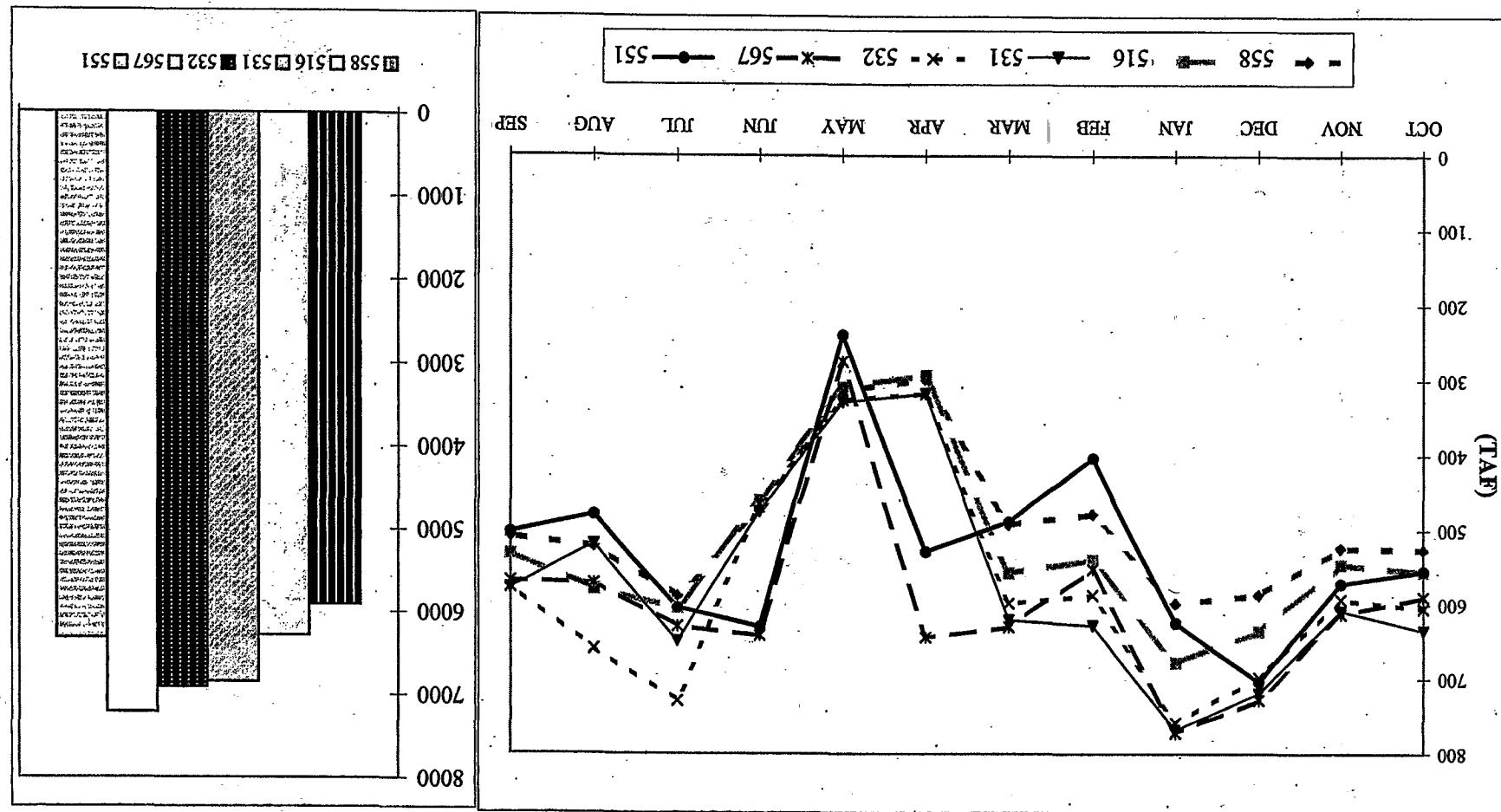
**A COMPARISON OF EXISTING CONDITIONS (558),  
NO ACTION (516), ALTERNATIVE 1 (531),  
ALTERNATIVE 2 (532), ALTERNATIVE 3 –  
10,000 CFS (567), ALTERNATIVE 3 – 15,000 CFS (551)**

#### Average Annual Total Values

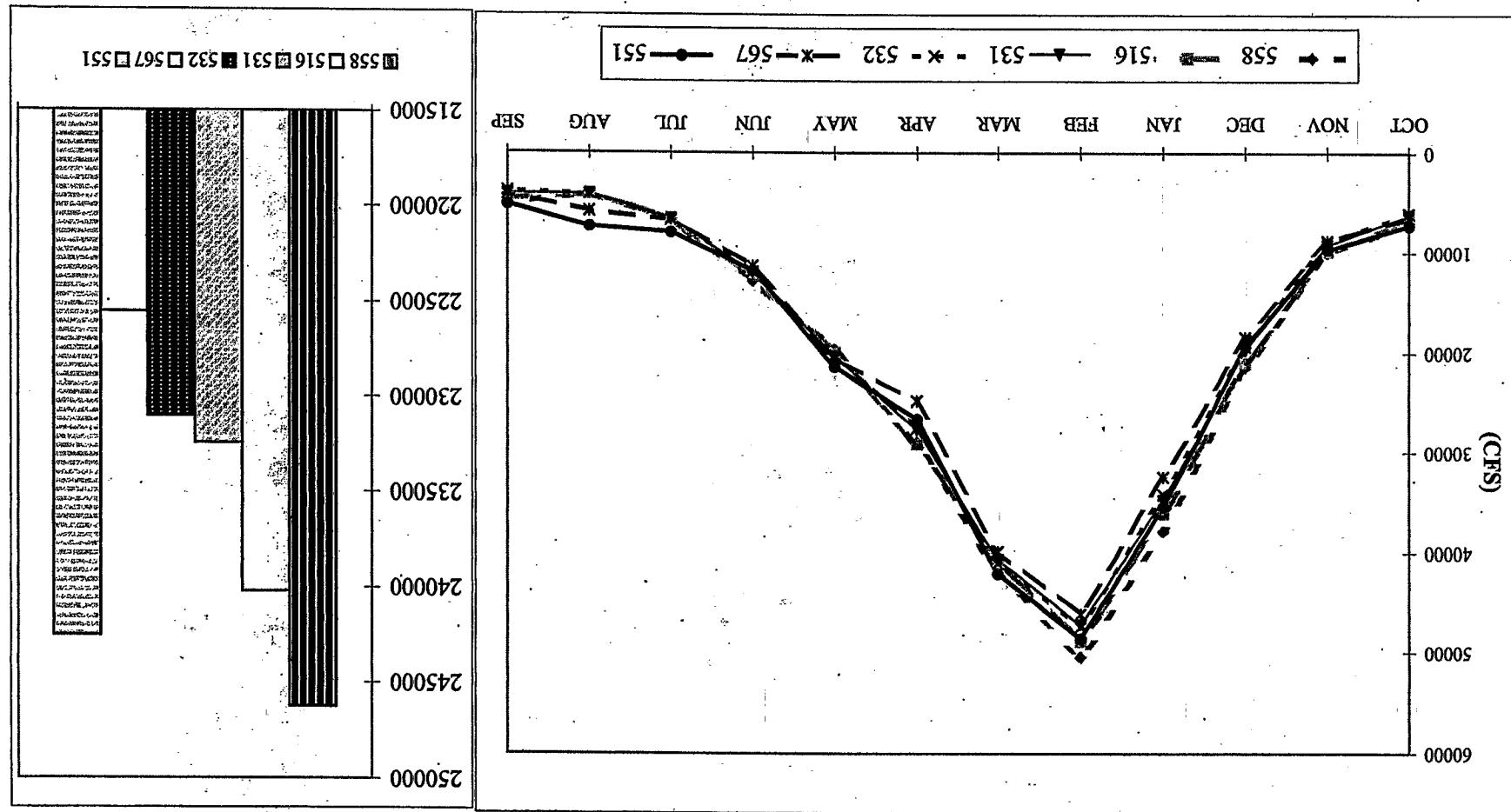
Data Selected from Year 1921 thru 1994

#### Average Monthly Values

Comparison of Total Delta Exports Under Various Delta Alternatives



Case	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	DEMMAR	Case Description
551	7288.2	9659.5	19280.4	35400.4	48567.9	42079.8	26599.5	21393.3	11744.1	7955.1	7386.9	5196.8	242552.0	Alt 3 w/ 15K IF
561	6521.6	8757.1	18373.2	32407.9	46116.5	39902.9	20535.8	11342.8	6717.9	5852.8	4243.1	225577.0	Alt 3 w/Storage	
567	6046.7	8880.2	19327.7	34151.0	47449.1	41059.4	27554.7	20149.7	11879.7	6589.1	4109.3	3845.5	231042.0	Alt 2 w/Storage
532	6231.1	9193.8	19694.1	34738.7	47195.1	40681.5	27669.8	20300.3	11956.8	6588.7	4110.9	4073.6	232434.5	Alt 1 w/Storage
531	6785.4	9886.7	20949.5	36092.6	48842.4	40727.2	29109.5	19952.1	12441.9	6656.9	4142.9	4636.7	240224.0	No Action
516	7092.0	9956.5	21471.8	37847.7	50446.7	42045.2	28866.2	19654.3	12835.5	6726.6	4172.4	5124.5	246239.4	Bxisting Condition
558	6785.4	9886.7	20949.5	36092.6	48842.4	40727.2	29109.5	19952.1	12441.9	6656.9	4142.9	4636.7	240224.0	No Action



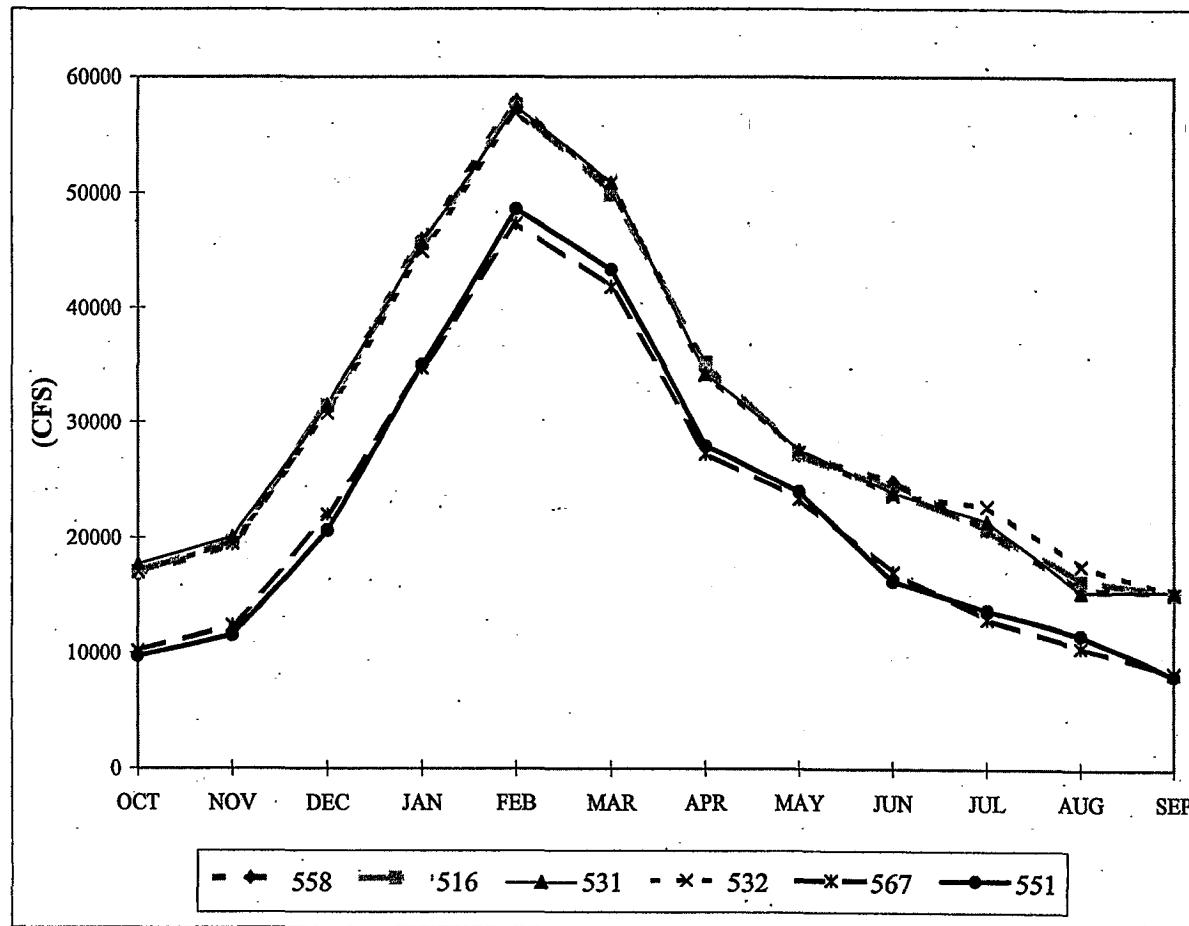
Data Selected from WYear 1921 thru 1994

Comparison of Total Delta Outflow Under Various Delta Alternatives

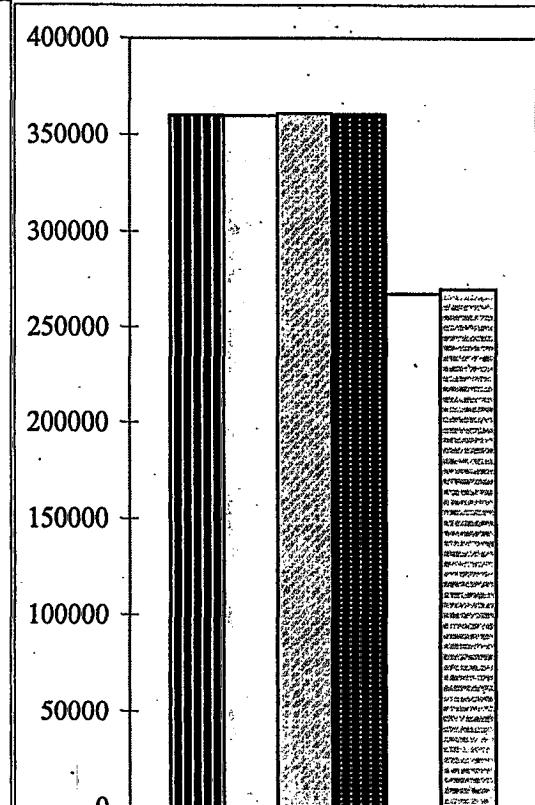
# Comparison of Total Delta Inflow Under Various Delta Alternatives

Data Selected from WYear1921 thru 1994

**Average Monthly Values**



**Average Annual Total Values**



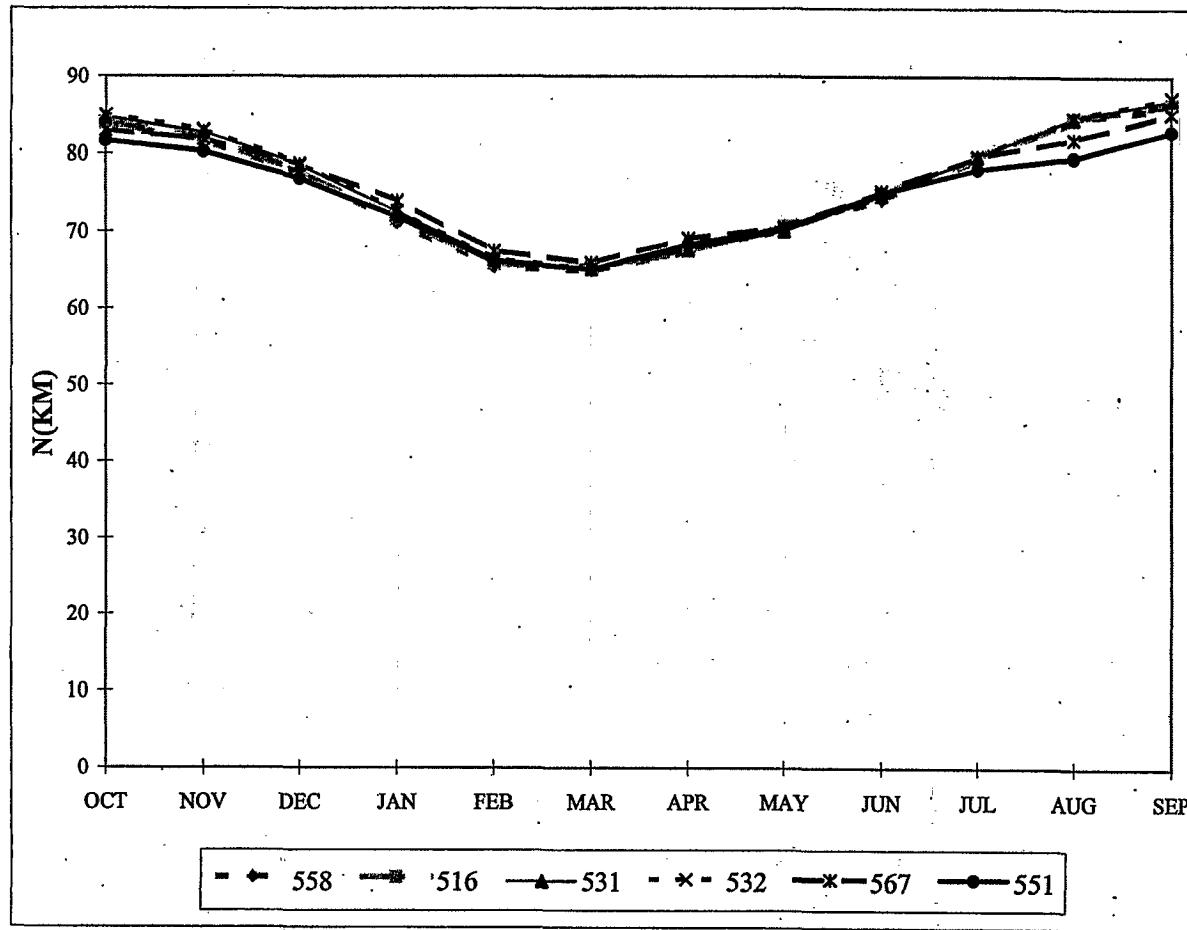
D — 0 1 0 5 8 2

Case	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	SUMMAR	Case Description
558	16740.2	19405.6	31160.3	46048.5	57940.0	50103.0	35136.5	27080.9	24897.5	20674.2	15457.4	15341.4	359985.5	Existing Condition
516	16950.5	19691.7	31406.7	45558.6	57424.2	49850.6	35251.1	27225.2	24138.1	20762.0	16314.7	15173.6	359746.9	No Action
531	17677.0	20048.1	31498.1	45676.7	57376.8	50836.4	34230.4	27605.1	23911.1	21419.8	15289.0	15380.8	360949.1	Alt 1 w/Storage
532	17011.6	19468.9	30789.8	44927.2	56893.5	50849.3	34110.9	27430.4	23663.4	22723.6	17588.4	15142.0	360598.9	Alt 2 w/Storage
567	10172.0	12323.5	21954.5	34709.7	47341.7	41846.9	27222.5	23373.5	17016.7	12913.8	10508.0	8362.5	267745.4	Alt 3 w/Storage
551	9701.7	11525.8	20602.4	35004.0	48589.9	43311.8	27934.3	23953.2	16199.6	13697.8	11551.7	8138.5	270210.8	Alt 3 w/ 15K IF

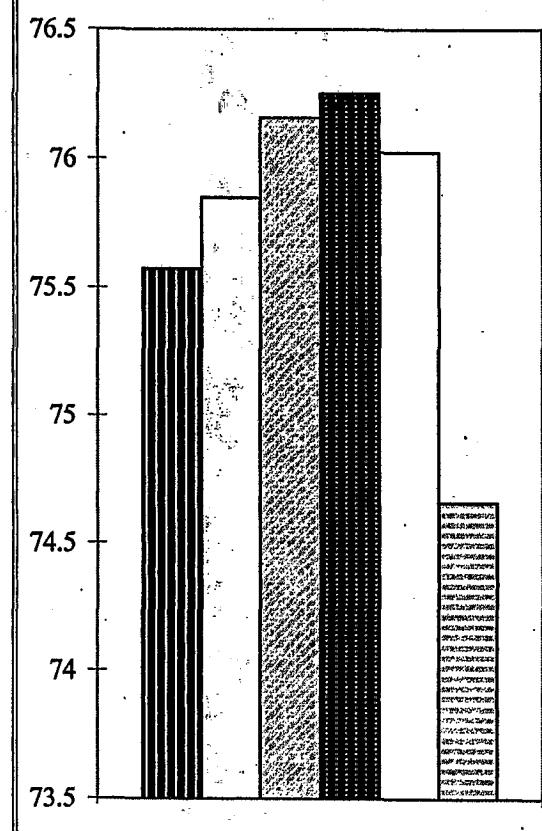
# Comparison of X2 Position Under Various Delta Alternatives

Data Selected from WYear1921 thru 1994

**Average Monthly Values**



**Average Annual Average Values**

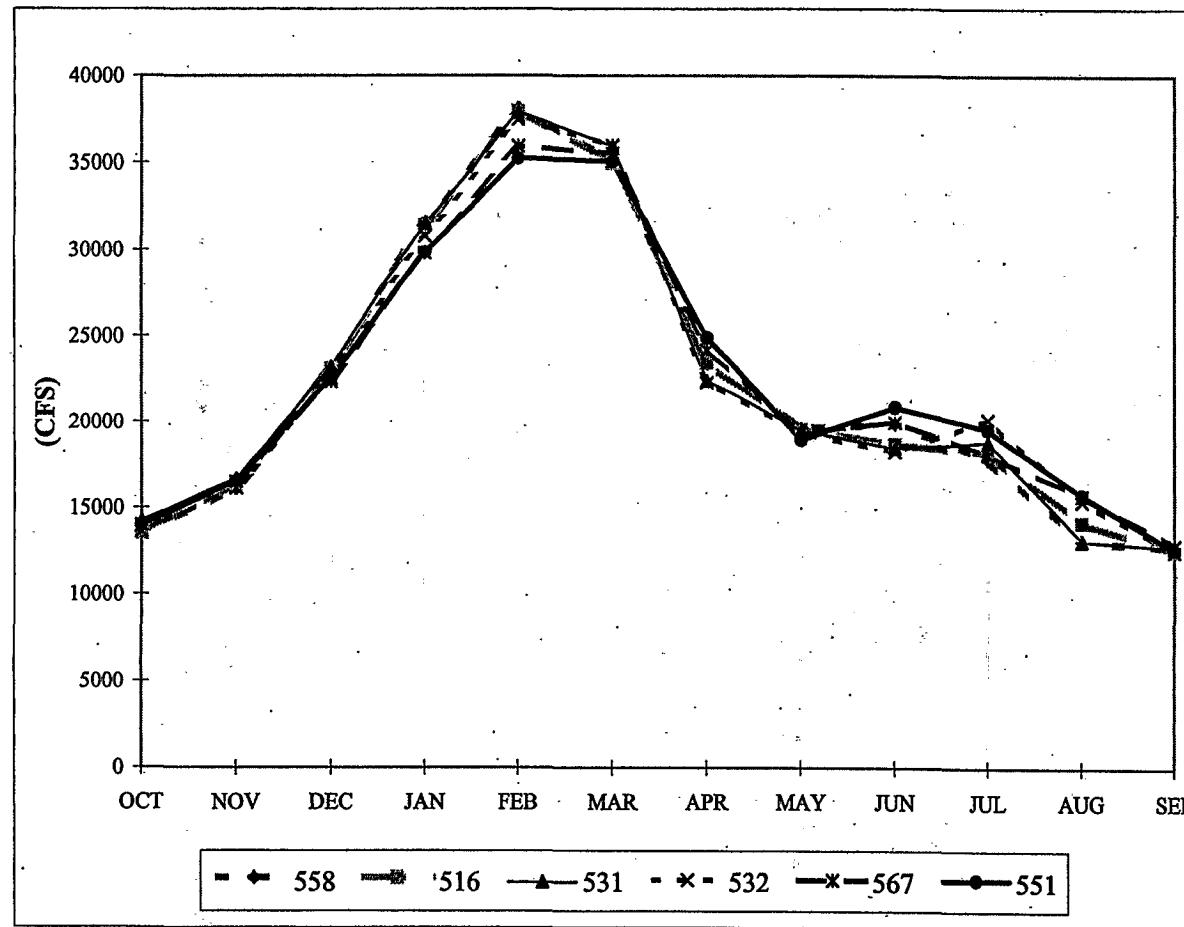


Case	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	SUMMAR	Case Description
558	83.7	81.8	77.4	71.1	65.5	64.9	67.4	70.8	74.2	79.4	84.5	86.1	75.6	Existing Condition
516	84.0	82.0	77.7	71.7	65.9	65.3	67.5	70.7	74.7	79.6	84.6	86.5	75.8	No Action
531	84.7	82.8	78.5	72.5	66.4	65.2	67.6	70.1	74.7	79.7	84.7	87.1	76.2	Alt 1 w/Storage
532	84.9	83.0	78.7	72.6	66.4	65.1	67.7	70.1	74.8	79.7	84.7	87.4	76.3	Alt 2 w/Storage
567	83.1	81.9	78.6	73.9	67.4	65.9	69.1	70.6	75.2	79.6	81.9	85.2	76.0	Alt 3 w/Storage
551	81.6	80.3	76.7	71.9	66.1	65.1	68.3	70.4	75.0	78.1	79.6	83.0	74.7	Alt 3 w/ 15K IF

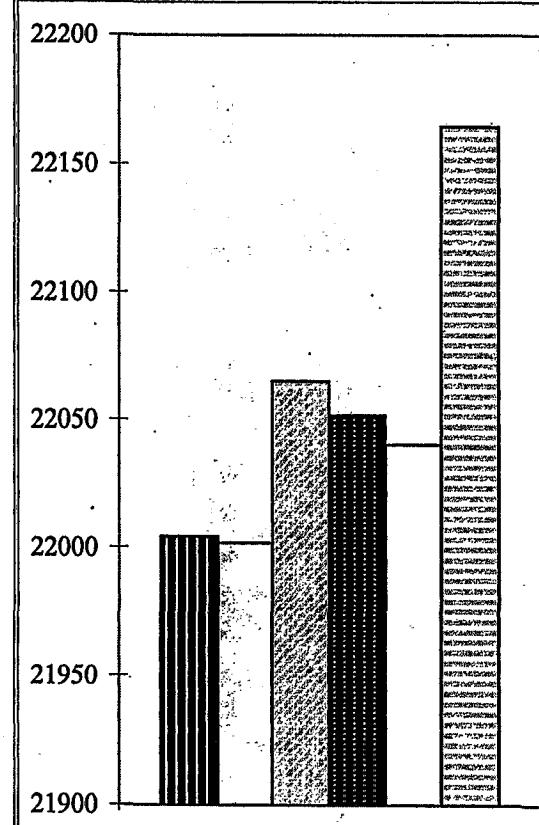
# Comparison of Flow at Freeport Under Various Delta Alternatives

Data Selected from WYear1921 thru 1994

**Average Monthly Values**



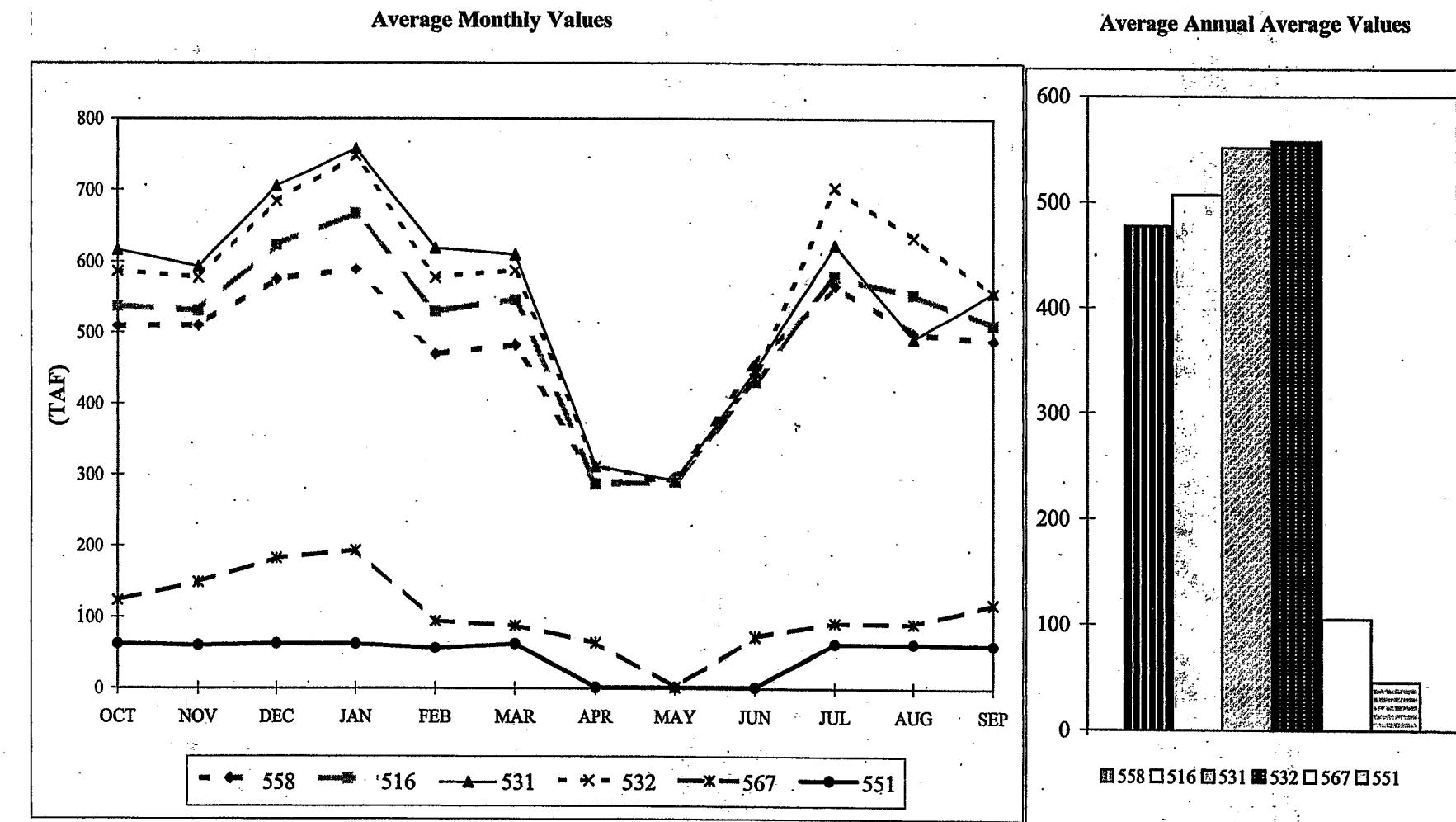
**Average Annual Average Values**



Case	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	SUMMAR	Case Description
558	13505.1	16096.0	22974.7	31617.7	38151.8	35068.0	23419.8	19611.0	19899.4	17831.0	13119.7	12759.6	22004.5	Existing Condition
516	13522.9	16326.7	23125.5	31404.5	37975.1	35003.2	23446.5	19561.1	18719.8	18209.9	14171.7	12555.6	22001.9	No Action
531	14249.2	16681.0	23216.0	31521.2	37924.7	35973.6	22425.3	19530.6	18490.9	18861.4	13146.0	12762.1	22065.2	Alt 1 w/Storage
532	13603.4	16121.1	22537.6	30810.5	37489.6	35987.4	22314.3	19353.7	18260.5	20168.2	15445.8	12528.2	22051.7	Alt 2 w/Storage
567	13979.9	16507.2	22351.5	29795.7	35950.6	35539.9	24214.0	19364.4	19996.8	18124.2	15734.5	12923.9	22040.2	Alt 3 w/Storage
551	14003.5	16527.2	22549.4	29838.1	35252.4	35053.7	24914.6	18963.2	20889.8	19558.0	15785.6	12639.2	22164.5	Alt 3 w/ 15K IF

# Comparison of Total Exports From Delta Channels Under Various Delta Alternatives

Data Selected from WYear1921 thru 1994



Case	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	SUMMAR	Case Description
558	509.1	510.0	574.9	588.7	469.7	482.5	287.6	296.7	454.7	566.2	498.8	489.2	477.3	Existing Condition
516	537.2	530.8	622.9	667.1	529.9	546.3	286.4	290.0	431.1	578.3	553.1	510.9	507.0	No Action
531	615.8	593.1	705.6	757.2	618.3	609.4	311.3	292.2	446.3	622.6	491.7	556.5	551.7	Alt 1 w/Storage
532	586.1	577.2	684.6	747.2	577.4	586.8	311.0	290.7	436.0	702.7	633.1	555.8	557.4	Alt 2 w/Storage
567	123.1	148.3	182.2	193.6	93.9	87.3	63.6	1.5	72.0	91.1	90.2	117.9	105.4	Alt 3 w/Storage
551	61.9	60.0	62.5	61.8	56.0	61.9	1.0	1.0	1.0	62.0	61.9	60.0	45.9	Alt 3 w/ 15K IF

## **APPENDIX B**

**1928 – 1934**

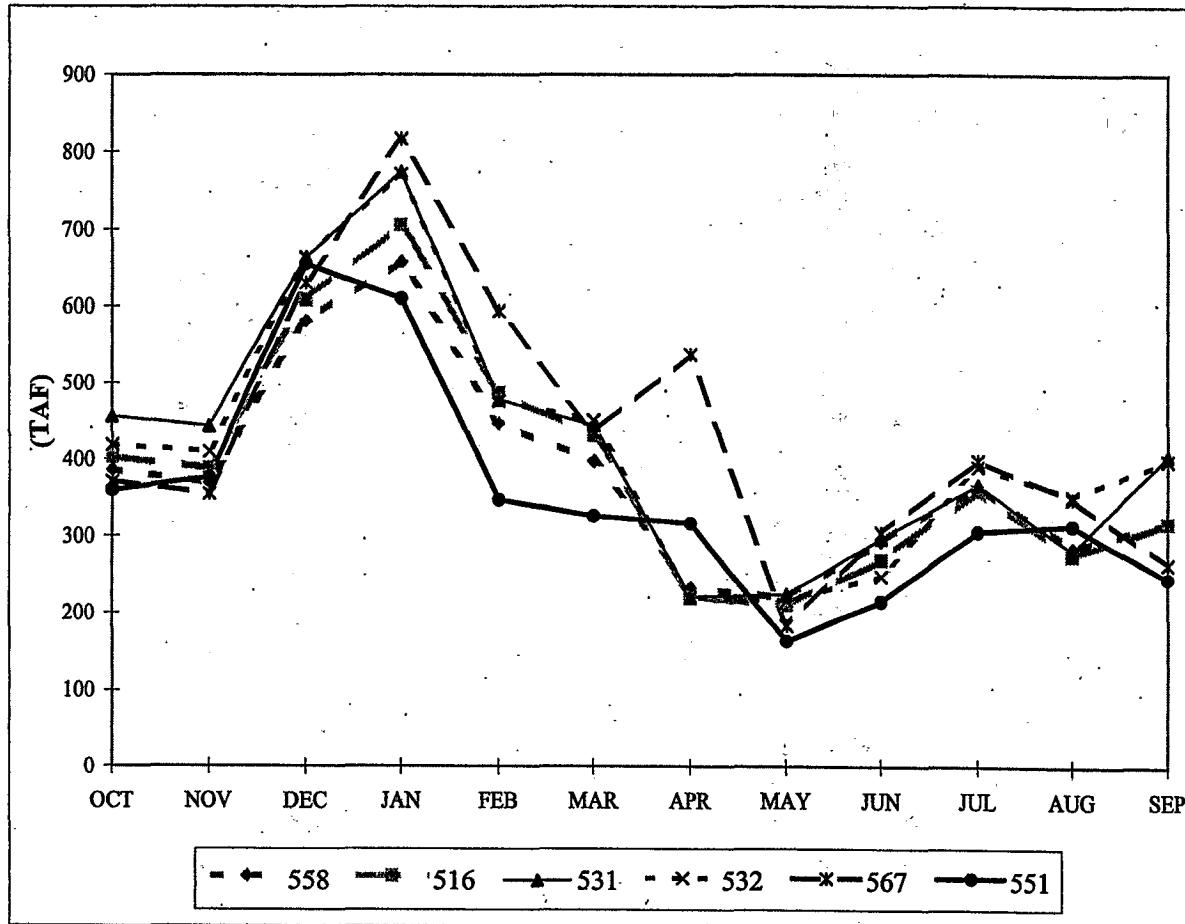
### **DWRSIM AVERAGE MONTHLY VALUES**

**A COMPARISON OF EXISTING CONDITIONS (558),  
NO ACTION (516), ALTERNATIVE 1 (531),  
ALTERNATIVE 2 (532), ALTERNATIVE 3 –  
10,000 CFS (567), ALTERNATIVE 3 – 15,000 CFS (551)**

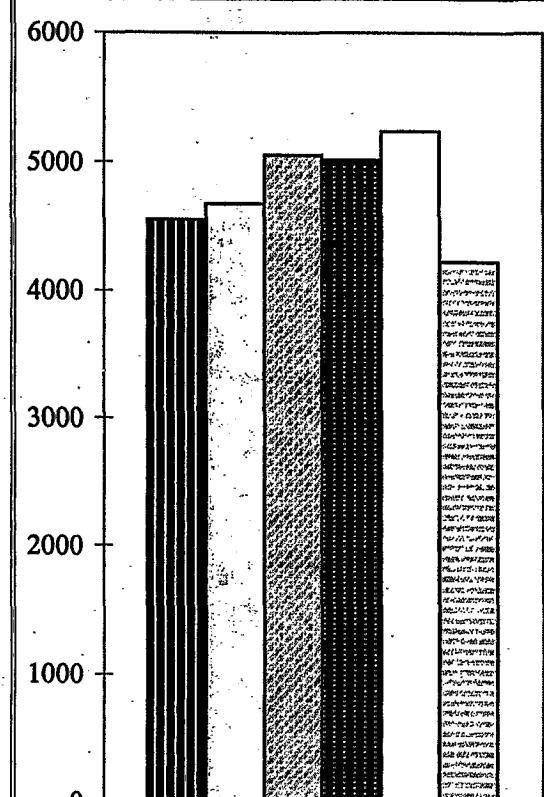
# Comparison of Total Delta Exports Under Various Delta Alternatives

Data Selected from WYear1927 thru 1934

**Average Monthly Values**



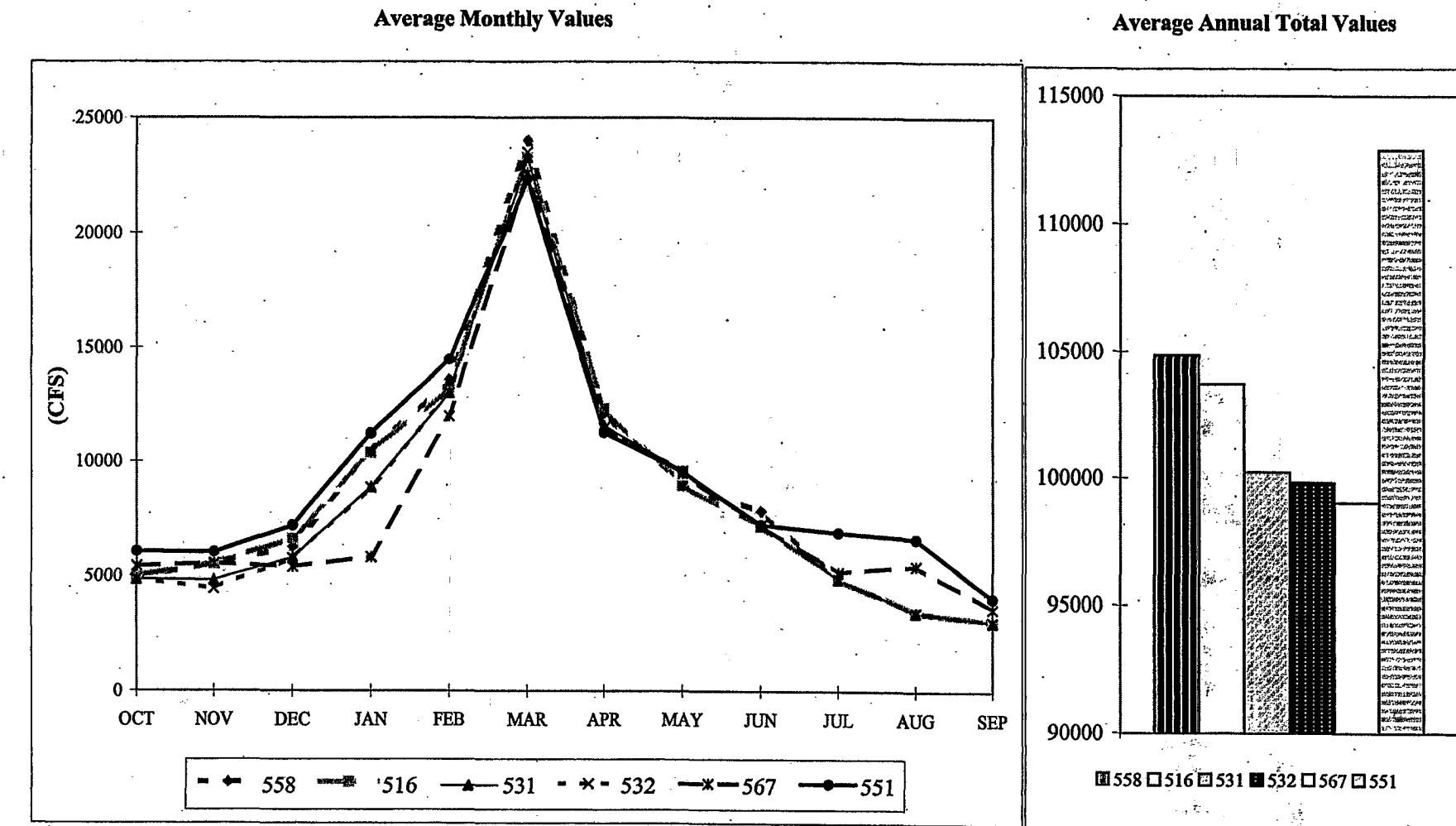
**Average Annual Total Values**



Case	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	SUMMAR	Case Description
558	386.4	369.0	580.9	657.7	446.7	397.6	232.1	219.1	293.7	364.9	285.1	317.9	4551.1	Existing Condition
516	402.6	388.3	608.4	706.0	486.6	431.7	221.7	210.0	269.0	359.6	274.9	317.3	4676.0	No Action
531	456.1	443.0	663.9	774.3	478.1	444.4	220.7	223.3	297.3	367.0	281.4	405.6	5055.1	Alt 1 w/Storage
532	419.0	409.7	663.6	771.6	476.7	451.1	219.6	215.9	247.6	391.0	351.9	399.3	5016.9	Alt 2 w/Storage
567	371.1	354.4	630.4	816.9	593.7	435.0	537.1	183.4	304.4	398.9	349.3	264.0	5238.7	Alt 3 w/Storage
551	359.3	376.1	654.9	609.7	346.7	325.7	316.1	163.3	214.6	305.9	313.6	245.0	4230.9	Alt 3 w/ 15K IF

# Comparison of Total Delta Outflow Under Various Delta Alternatives

Data Selected from WYear1927 thru 1934

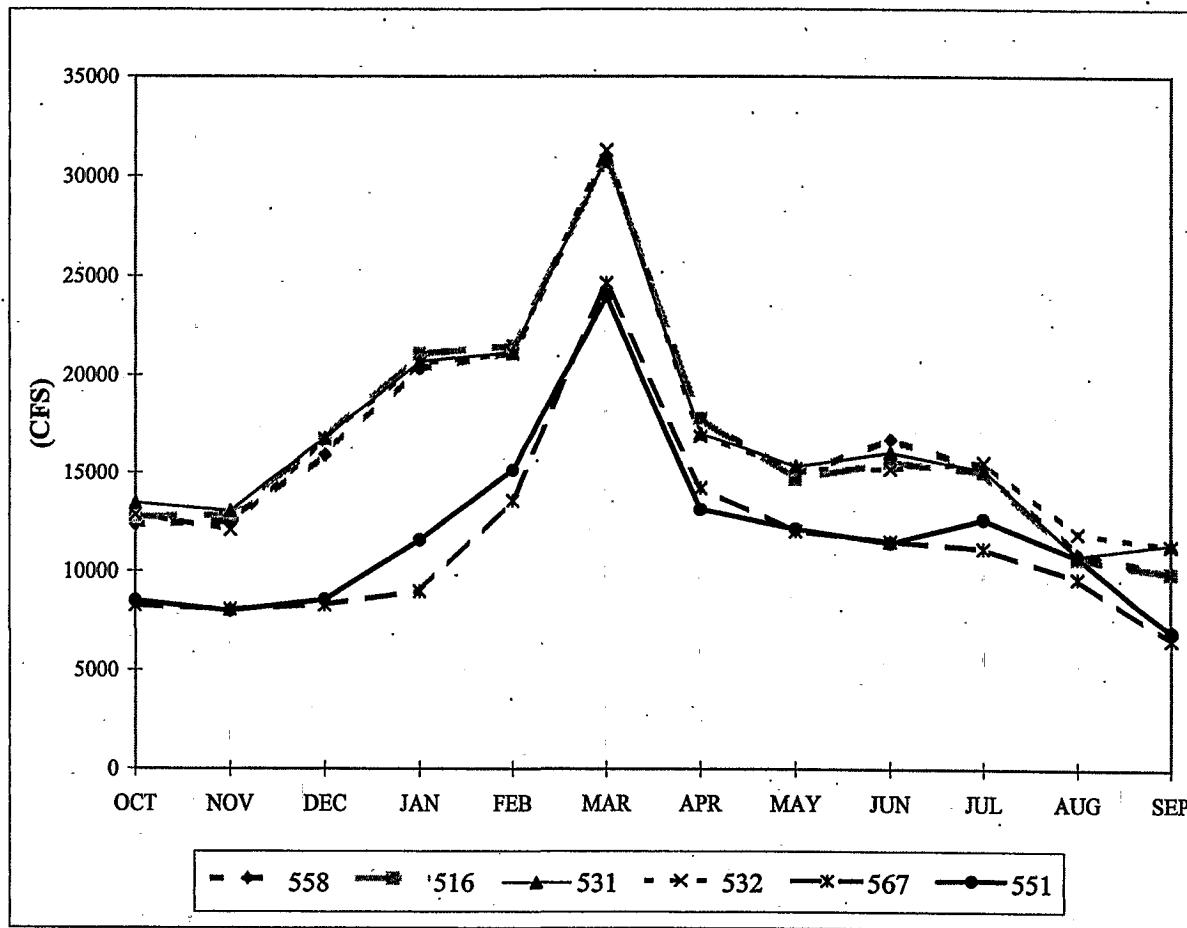


Case	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	SUMMAR	Case Description
558	4911.6	5548.2	6247.5	10390.0	13598.5	23995.5	12112.0	8935.6	7843.4	4855.8	3413.0	3008.2	104859.3	Existing Condition
516	4976.6	5529.0	6626.2	10373.8	13212.4	23256.7	12316.1	8949.5	7209.6	4855.8	3413.0	3008.2	103726.8	No Action
531	4846.5	4804.0	5801.4	8875.2	13021.9	23275.3	11562.2	9569.9	7207.2	4855.8	3410.7	3008.2	100238.2	Alt 1 w/Storage
532	4846.5	4429.5	5754.9	8835.7	12988.4	23491.4	11437.4	9567.5	7209.6	4855.8	3410.7	3008.2	99835.6	Alt 2 w/Storage
567	5415.7	5531.4	5378.6	5810.7	11974.3	22608.5	11459.0	9470.0	7216.8	5155.5	5436.6	3589.2	99046.2	Alt 3 w/Storage
551	6052.3	6016.4	7197.7	11221.8	14476.2	22332.0	11262.1	9562.9	7233.6	6893.4	6607.6	4028.5	112884.6	Alt 3 w/ 15K IF

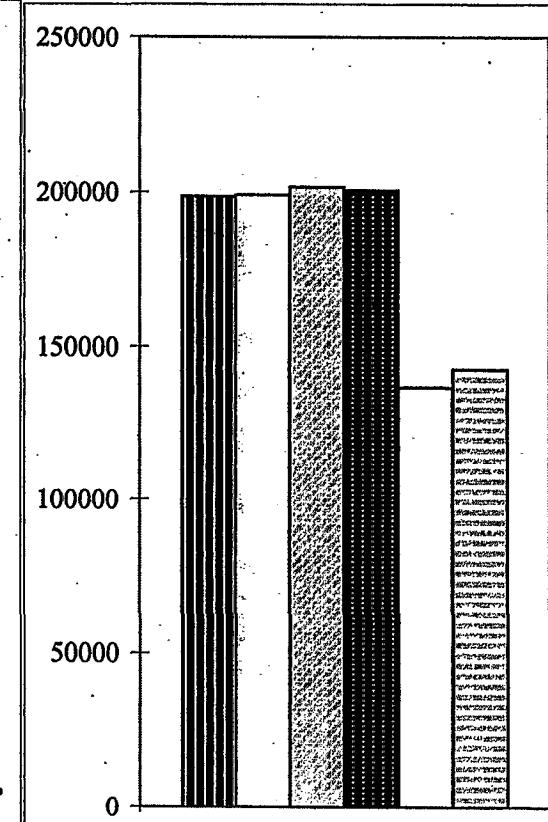
# Comparison of Total Delta Inflow Under Various Delta Alternatives

Data Selected from WYear1927 thru 1934

**Average Monthly Values**



**Average Annual Total Values**

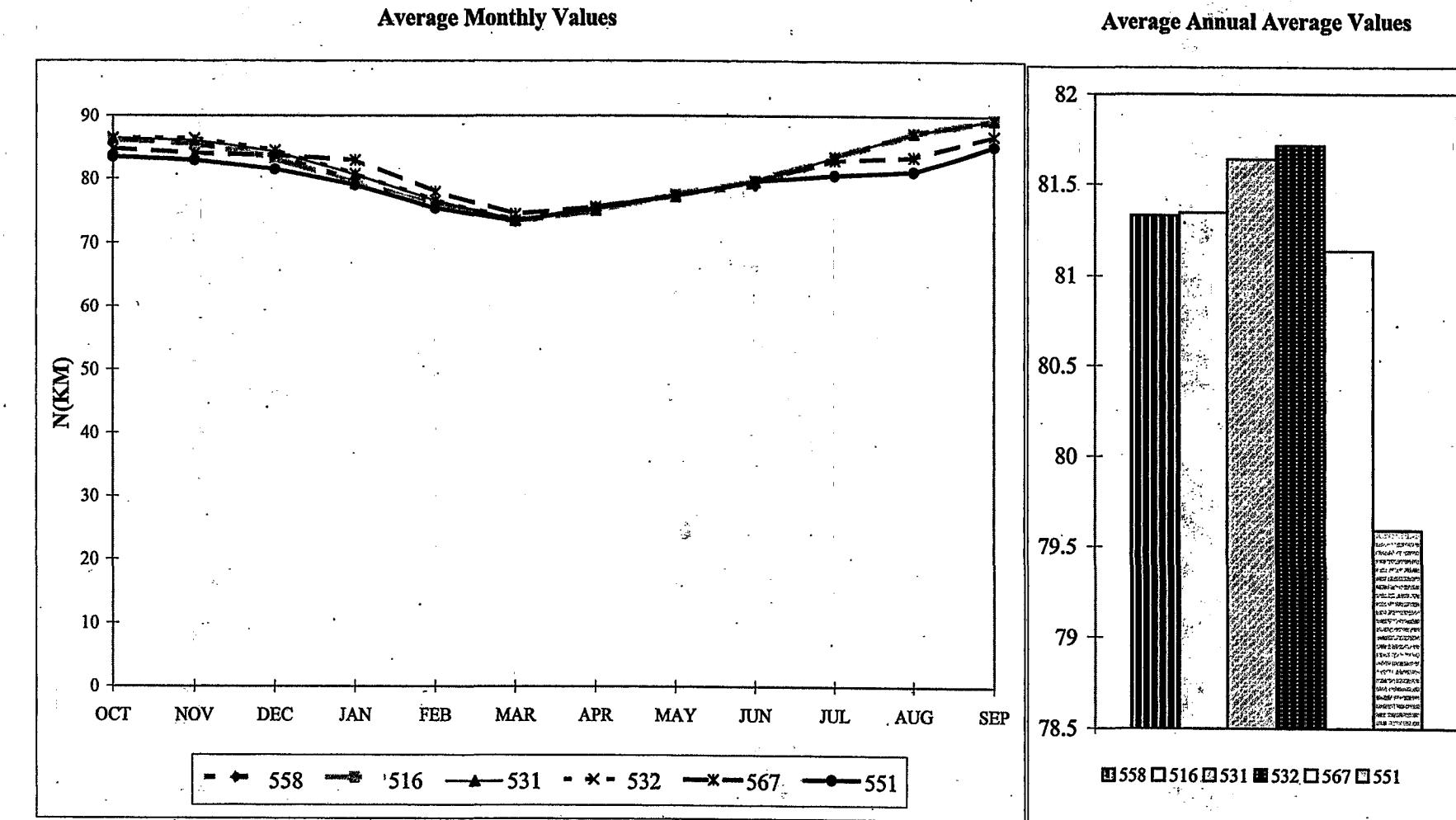


Case	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	SUMMAR	Case Description
558	12355.6	12536.9	15901.0	20313.0	21127.4	30902.9	17780.3	14874.1	16716.7	15222.6	10908.1	10023.3	198661.9	Existing Condition
516	12713.4	12844.2	16695.6	21054.2	21459.5	30730.9	17780.3	14662.7	15554.7	15043.7	10692.1	9936.9	199168.1	No Action
531	13459.2	13041.1	16769.9	20673.2	21114.5	30956.3	17004.8	15350.4	16025.3	15164.5	10794.3	11418.2	201771.6	Alt 1 w/Storage
532	12857.4	12104.8	16723.5	20582.5	21057.9	31276.9	16858.4	15231.9	15194.6	15554.8	11944.3	11314.9	200702.0	Alt 2 w/Storage
567	8275.8	8064.3	8319.9	8979.7	13572.7	24622.8	14215.1	12041.9	11521.4	11156.7	9639.6	6559.0	136968.9	Alt 3 w/Storage
551	8503.5	8006.6	8556.9	11572.6	15117.1	23977.0	13129.9	12151.1	11449.4	12629.7	10740.8	6967.1	142801.8	Alt 3 w/ 15K IF

D-010589

# Comparison of X2 Position Under Various Delta Alternatives

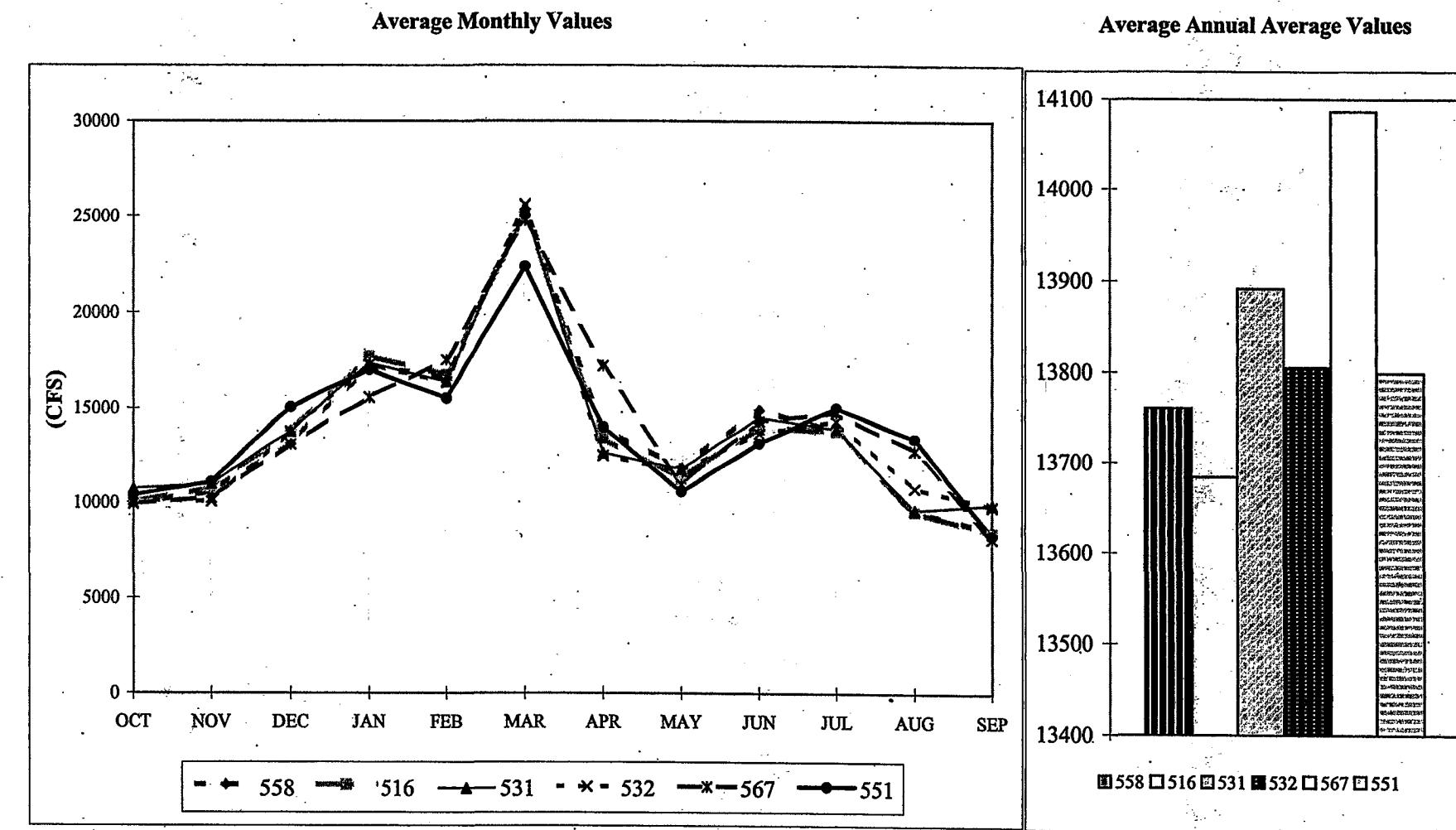
Data Selected from WYear1927 thru 1934



Case	OCT	NOV.	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	SUMMAR	Case Description
558	86.3	85.5	83.7	79.6	75.8	73.4	75.1	77.6	79.1	83.3	87.2	89.4	81.3	Existing Condition
516	86.2	85.5	83.3	79.2	75.9	73.5	75.0	77.6	79.7	83.5	87.3	89.4	81.3	No Action
531	86.4	86.0	84.2	80.6	76.5	73.5	75.2	77.3	79.6	83.5	87.3	89.4	81.6	Alt 1 w/Storage
532	86.5	86.4	84.4	80.7	76.6	73.6	75.3	77.3	79.6	83.5	87.3	89.4	81.7	Alt 2 w/Storage
567	84.7	84.0	83.7	82.9	78.0	74.5	75.6	77.3	79.6	82.9	83.5	86.9	81.1	Alt 3 w/Storage
551	83.5	83.0	81.5	79.0	75.4	73.4	75.4	77.4	79.6	80.5	81.2	85.2	79.6	Alt 3 w/ 15K IF

# Comparison of Flow at Freeport Under Various Delta Alternatives

Data Selected from WYear 1927 thru 1934

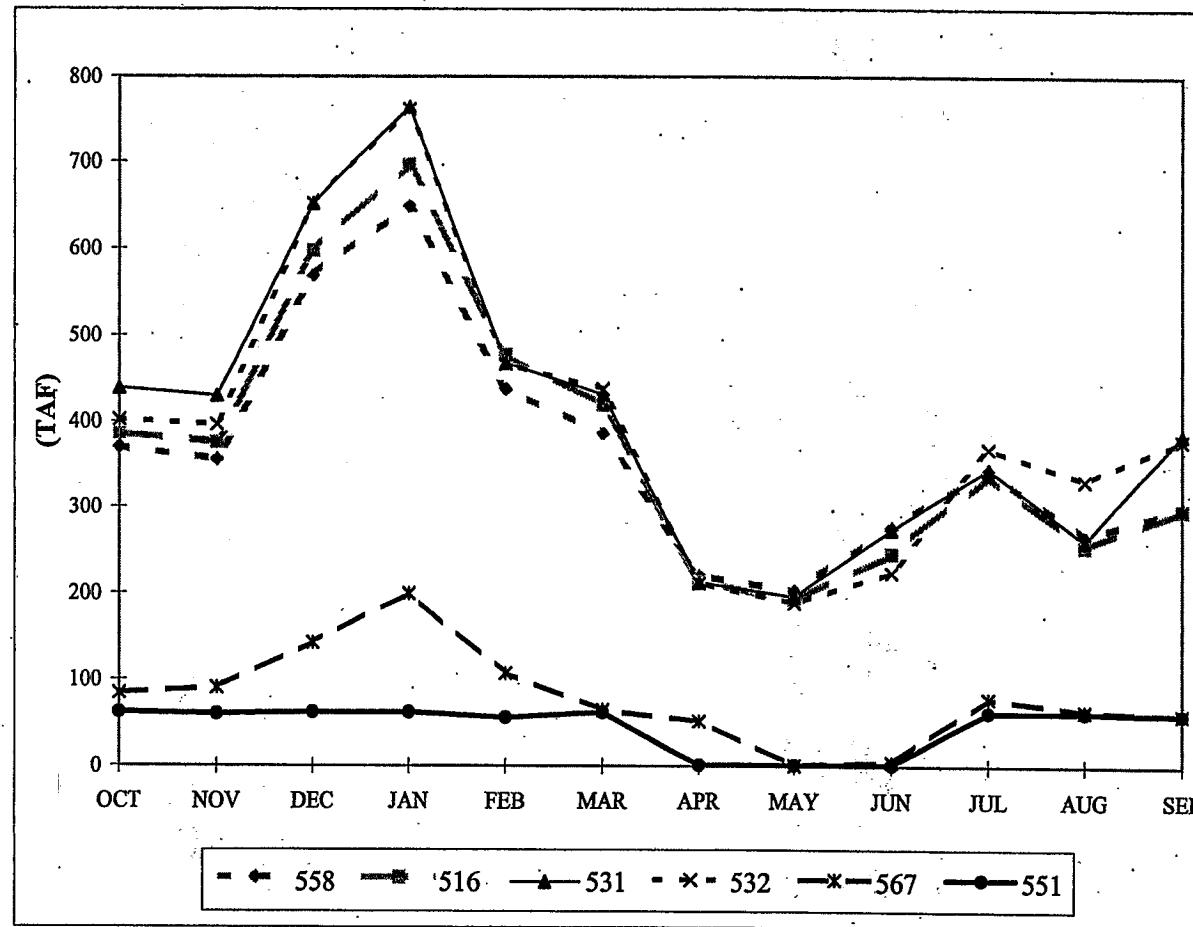


Case	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	SUMMAR	Case Description
558	9923.0	10558.7	13082.8	17169.5	16604.9	25364.0	13883.8	11816.6	14892.1	13761.2	9569.9	8498.8	13760.4	Existing Condition
516	9976.5	10772.4	13693.8	17710.9	16723.3	25041.1	13384.4	11238.0	13994.2	13763.5	9507.1	8402.8	13684.0	No Action
531	10731.5	10971.6	13768.2	17327.5	16391.2	25273.4	12613.8	11767.8	14464.8	13886.7	9611.7	9891.3	13891.6	Alt 1 w/Storage
532	10125.2	10037.7	13721.7	17260.2	16332.0	25591.7	12472.1	11651.6	13636.5	14281.6	10764.1	9785.6	13805.0	Alt 2 w/Storage
567	9909.1	10215.4	13057.2	15536.2	17516.1	24759.9	17194.5	10975.5	14289.5	14713.8	12750.5	8114.7	14086.0	Alt 3 w/Storage
551	10364.5	11062.9	15036.7	16999.9	15498.1	22380.8	13960.6	10545.7	13113.1	14997.2	13363.9	8265.9	13799.1	Alt 3 w/ 15K IF

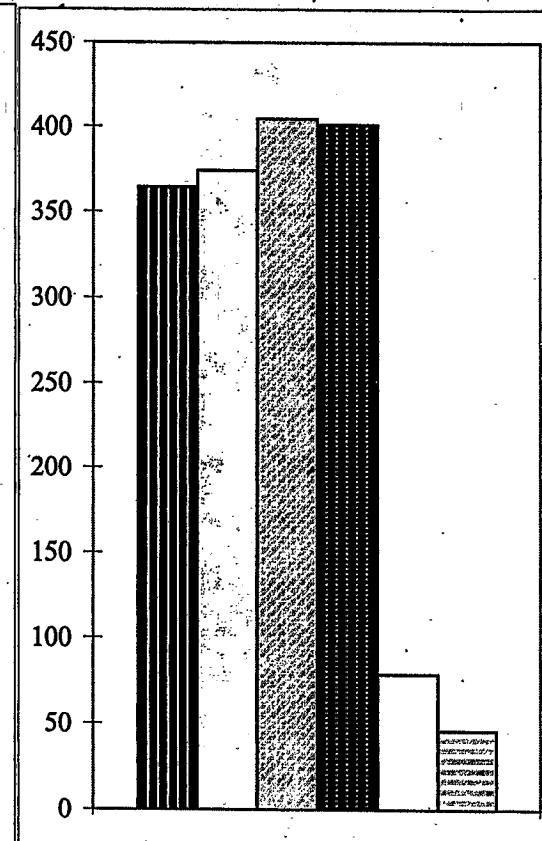
# Comparison of Total Exports From Delta Channels Under Various Delta Alternatives

Data Selected from WYear1927 thru 1934

Average Monthly Values



Average Annual Average Values



Case	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	SUMMAR	Case Description
558	369.7	355.4	568.7	648.6	437.9	385.6	220.4	202.7	276.3	343.1	265.3	299.3	364.4	Existing Condition
516	385.3	375.3	596.9	696.3	476.9	418.9	214.1	192.4	245.6	336.9	254.1	296.9	374.1	No Action
531	438.7	429.9	651.7	764.1	468.0	431.3	212.9	196.4	273.6	344.1	260.1	384.6	404.6	Alt 1 w/Storage
532	401.7	396.3	651.6	761.4	466.7	437.7	211.6	188.7	223.9	367.9	330.7	378.1	401.4	Alt 2 w/Storage
567	84.3	90.4	142.3	199.3	107.0	64.6	52.0	0.9	4.3	78.0	63.7	60.0	78.9	Alt 3 w/Storage
551	62.0	60.0	61.9	62.0	56.0	61.9	1.0	1.0	1.0	62.0	61.9	59.9	45.9	Alt 3 w/ 15K IF

## **APPENDIX C**

**1976 – 1991**

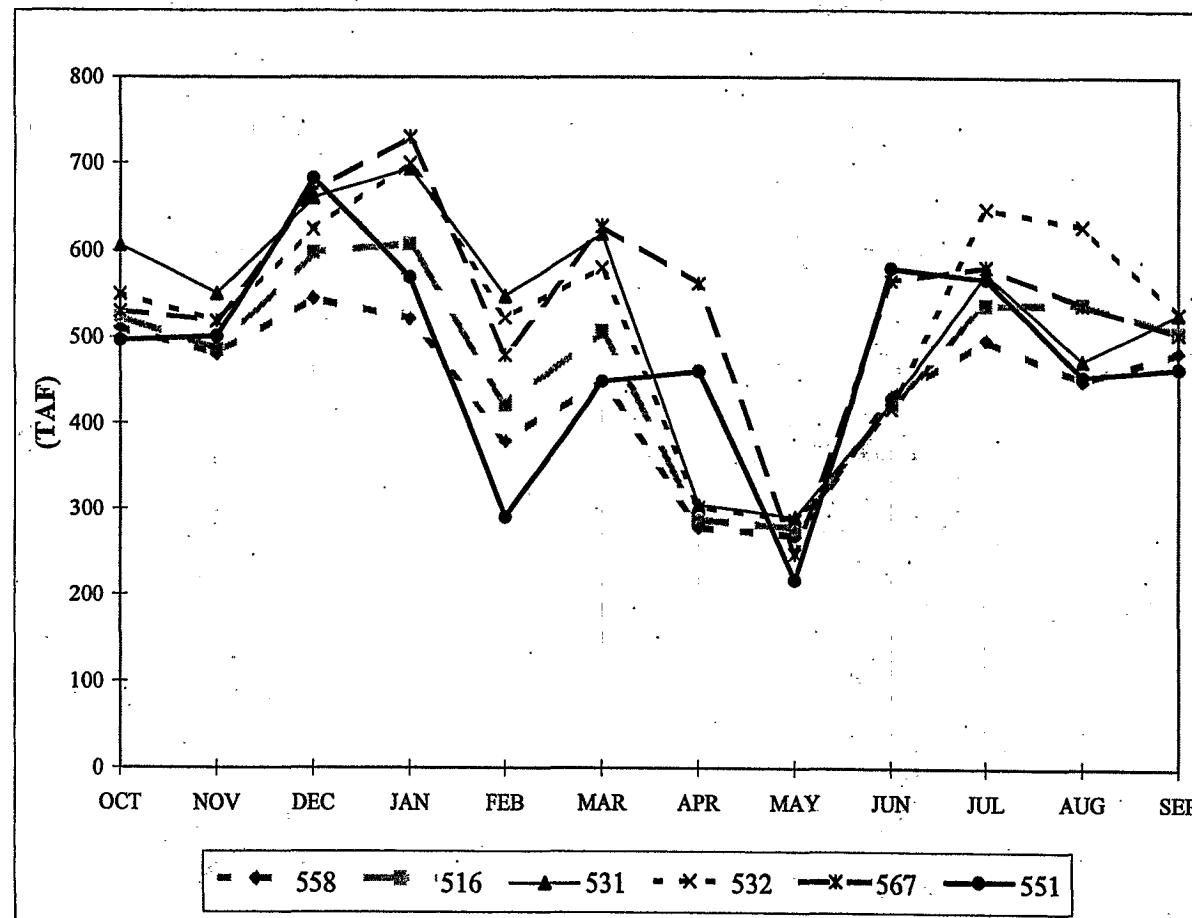
### **DWRSIM AVERAGE MONTHLY VALUES**

**A COMPARISON OF EXISTING CONDITIONS (558),  
NO ACTION (516), ALTERNATIVE 1 (531),  
ALTERNATIVE 2 (532), ALTERNATIVE 3 –  
10,000 CFS (567), ALTERNATIVE 3 – 15,000 CFS (551)**

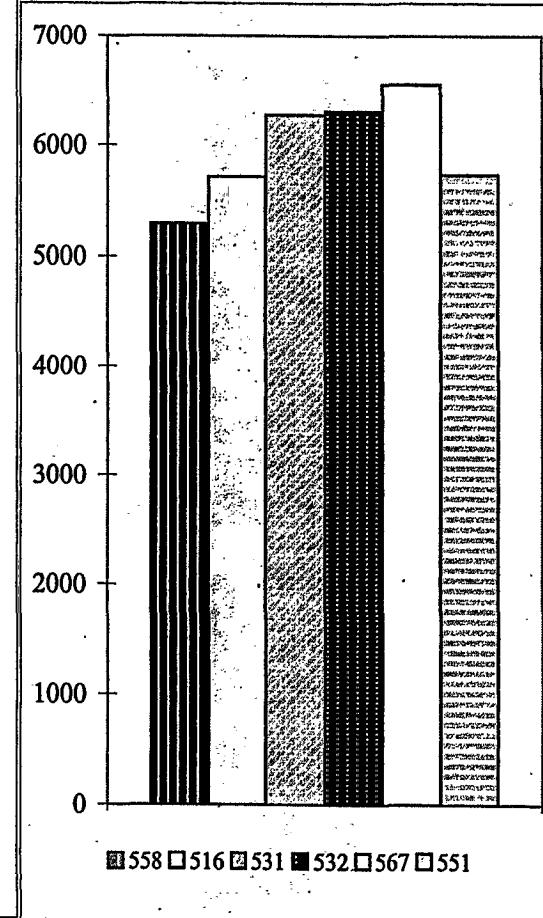
# Comparison of Total Delta Exports Under Various Delta Alternatives

Data Selected from WYear1975 thru 1991

**Average Monthly Values**



**Average Annual Total Values**



Case	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	SUMMAR	Case Description
558	510.8	480.3	544.9	521.1	379.3	449.5	278.3	268.5	431.0	497.6	449.6	483.6	5294.4	Existing Condition
516	523.4	485.6	597.8	607.5	421.2	506.7	287.2	277.6	422.6	537.8	538.9	506.4	5712.6	No Action
531	605.9	550.4	660.6	693.7	547.7	619.3	304.8	290.3	424.3	573.4	473.4	527.6	6271.4	Alt 1 w/Storage
532	549.7	518.4	624.4	699.6	522.4	580.3	301.6	287.2	416.8	648.1	628.1	528.9	6305.5	Alt 2 w/Storage
567	530.1	518.5	667.9	729.7	479.3	627.8	562.1	247.7	565.6	581.6	538.0	505.4	6553.6	Alt 3 w/Storage
551	496.3	500.9	682.6	569.2	290.4	448.9	460.6	217.0	579.8	567.4	455.1	465.0	5733.1	Alt 3 w/ 15K IF

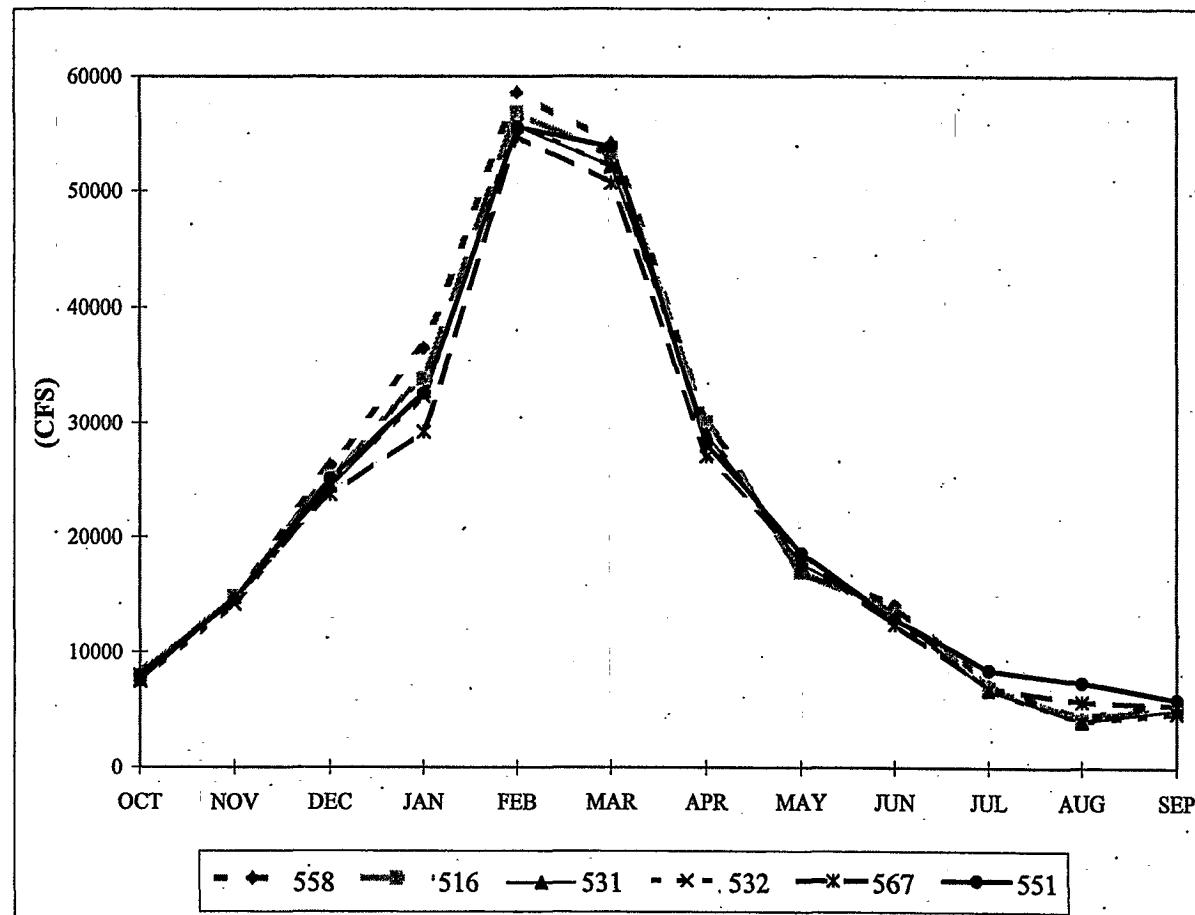
D - 0 1 0 5 9 4

D-010594

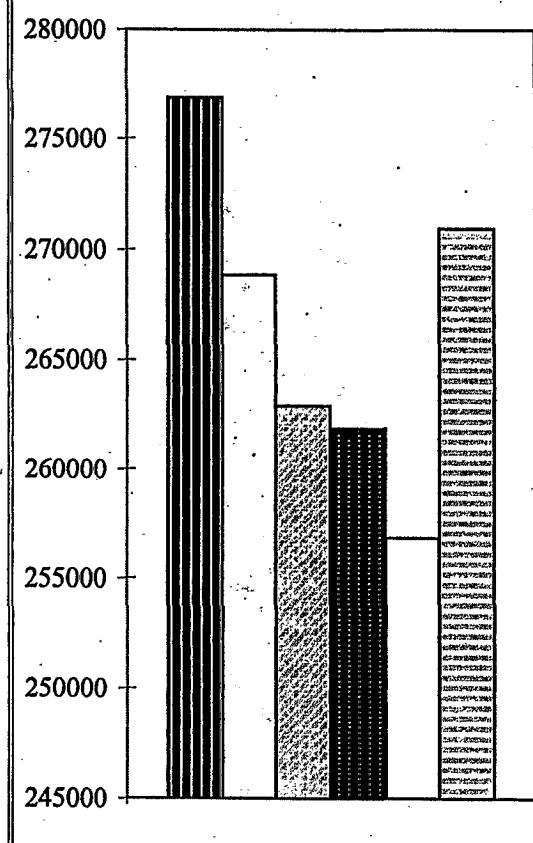
# Comparison of Total Delta Outflow Under Various Delta Alternatives

Data Selected from WYear1975 thru 1991

**Average Monthly Values**



**Average Annual Total Values**

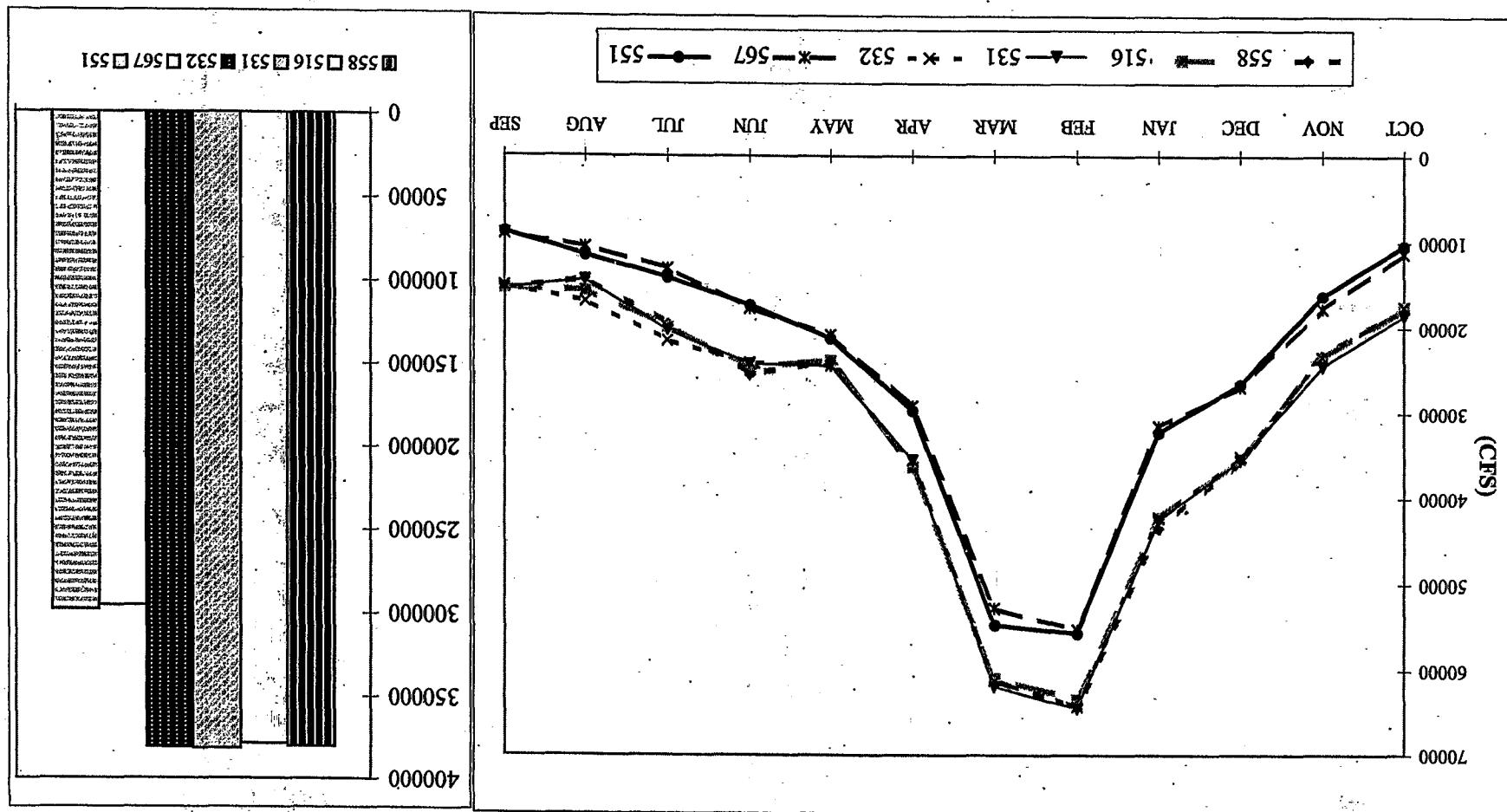


Case	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	SUMMAR	Case Description
558	8076.8	14686.0	26322.4	36497.2	58589.0	54121.7	30101.9	17086.8	14129.3	7186.4	4286.4	5806.3	276890.1	Existing Condition
516	7912.2	14836.2	25330.3	33868.6	56846.8	52986.3	30100.9	16978.0	13516.9	6956.7	4205.1	5310.6	268848.5	No Action
531	7562.5	14742.7	24463.3	32688.5	55605.9	52165.0	29044.2	17671.2	13073.7	6777.8	4028.3	5065.8	262888.8	Alt 1 w/Storage
532	7439.5	14192.3	24694.0	32288.0	55841.2	52058.3	29083.1	17672.3	13073.7	6779.8	4016.1	4749.7	261887.8	Alt 2 w/Storage
567	7978.2	14823.6	23711.1	29192.9	54726.4	50704.3	27080.1	18057.5	12447.7	6899.8	5771.5	5443.9	256836.8	Alt 3 w/Storage
551	7931.5	14530.5	25130.1	32541.1	55549.5	53830.0	28182.9	18576.9	12858.4	8458.0	7410.0	5970.2	270969.1	Alt 3 w/ 15K IF

D - 0 1 0 5 9 5

D-010595

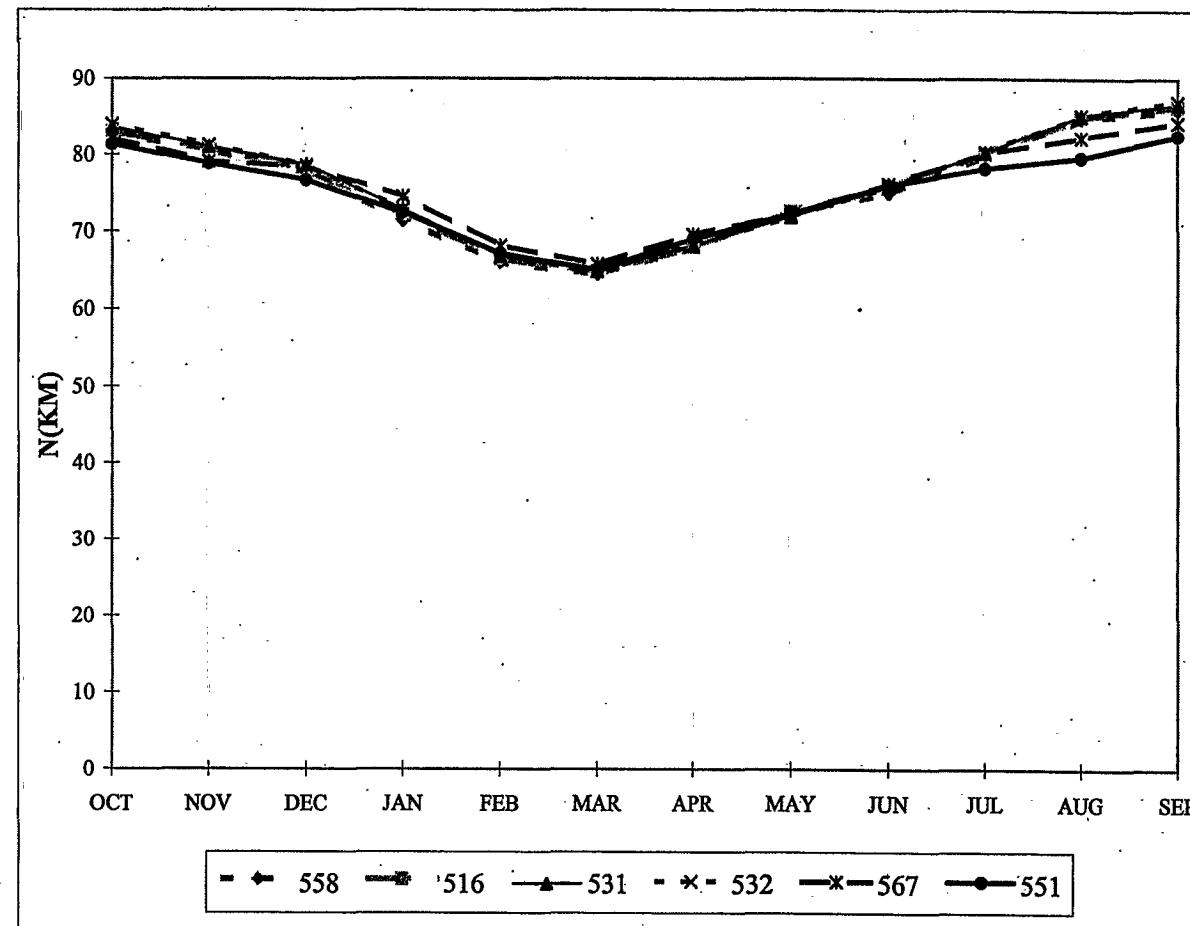
Case	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	UMMAR	Case Description
558	17490.3	23271.5	35454.3	43492.5	64381.8	61088.5	36188.7	23881.8	25511.9	19611.7	14332.2	15510.5	380215.6	Existing Condition
516	17558.4	23491.0	35302.8	42257.5	63393.0	60884.2	36309.5	23847.3	24636.9	19935.9	15663.7	15320.4	378600.7	No Action
531	18545.4	24490.9	35455.3	42477.1	64433.6	61892.6	35548.0	24471.4	24221.1	20336.4	14420.6	15427.5	381720.8	Alt 1 w/Storage
532	17510.6	23399.6	35096.5	42174.2	64212.8	61149.5	35533.2	24417.5	24096.0	21551.1	16925.2	15136.6	381202.9	Alt 2 w/Storage
567	11269.5	17704.7	26865.2	31517.5	55223.0	52762.7	29178.6	20862.9	17744.6	13068.7	10555.0	9018.3	29570.6	Alt 3 w/Storage
551	10366.9	16243.6	26571.4	32206.7	55654.3	54679.7	29676.5	21232.9	17333.9	14121.7	11508.4	8805.1	298401.2	Alt 3 w/ 15K IF



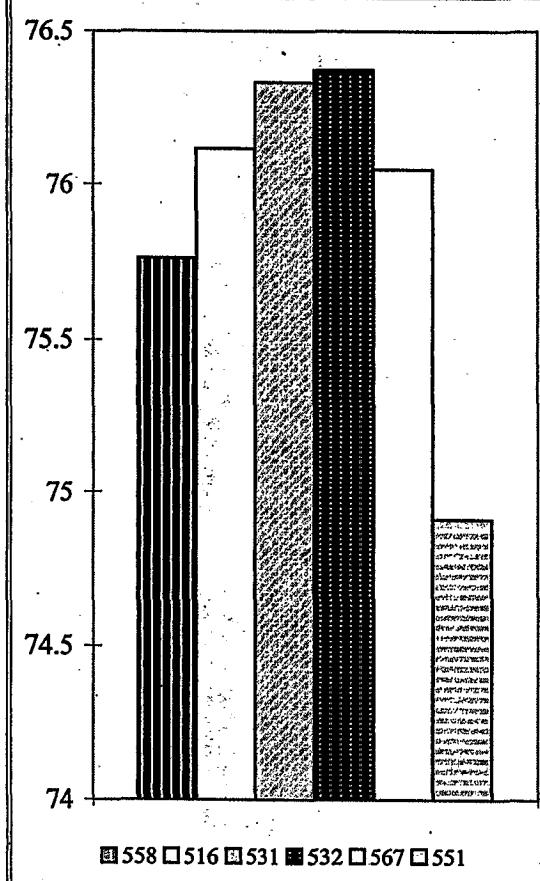
# Comparison of X2 Position Under Various Delta Alternatives

Data Selected from WYear1975 thru 1991

**Average Monthly Values**



**Average Annual Average Values**

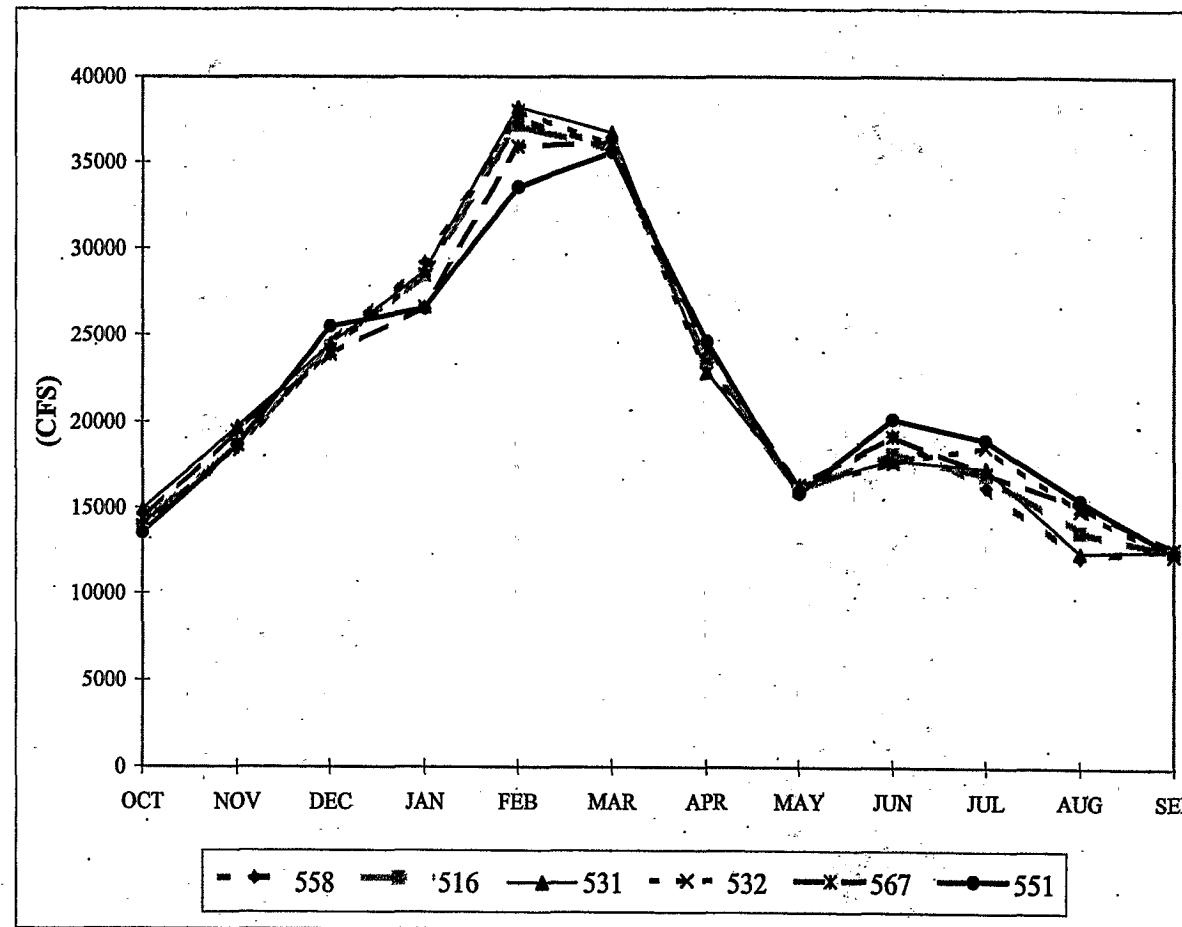


Case	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	SUMMAR	Case Description
558	82.8	80.6	77.6	71.4	66.0	64.5	68.0	72.5	75.0	80.0	84.8	85.9	75.8	Existing Condition
516	83.1	80.8	78.1	72.2	66.5	64.8	68.0	72.6	75.7	80.3	85.0	86.4	76.1	No Action
531	83.7	81.0	78.7	72.8	66.8	64.9	68.2	71.9	75.8	80.4	85.2	86.6	76.3	Alt 1 w/Storage
532	83.9	81.3	78.6	72.8	66.7	64.8	68.2	71.9	75.8	80.4	85.2	87.0	76.4	Alt 2 w/Storage
567	82.1	79.1	78.4	74.5	68.1	65.8	69.6	72.2	76.2	80.2	82.3	84.3	76.0	Alt 3 w/Storage
551	81.3	78.8	76.6	72.4	67.1	65.1	69.0	72.3	76.0	78.2	79.6	82.5	74.9	Alt 3 w/ 15K IF

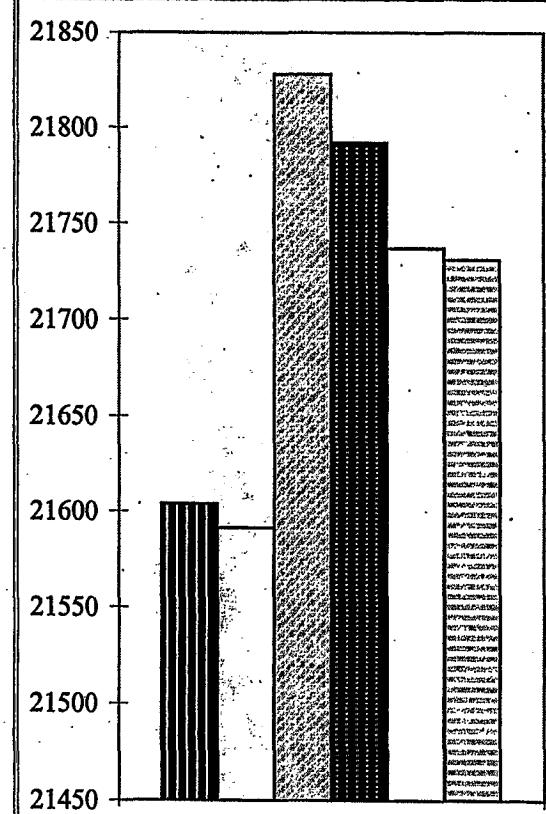
# Comparison of Flow at Freeport Under Various Delta Alternatives

Data Selected from WYear1975 thru 1991

**Average Monthly Values**



**Average Annual Average Values**

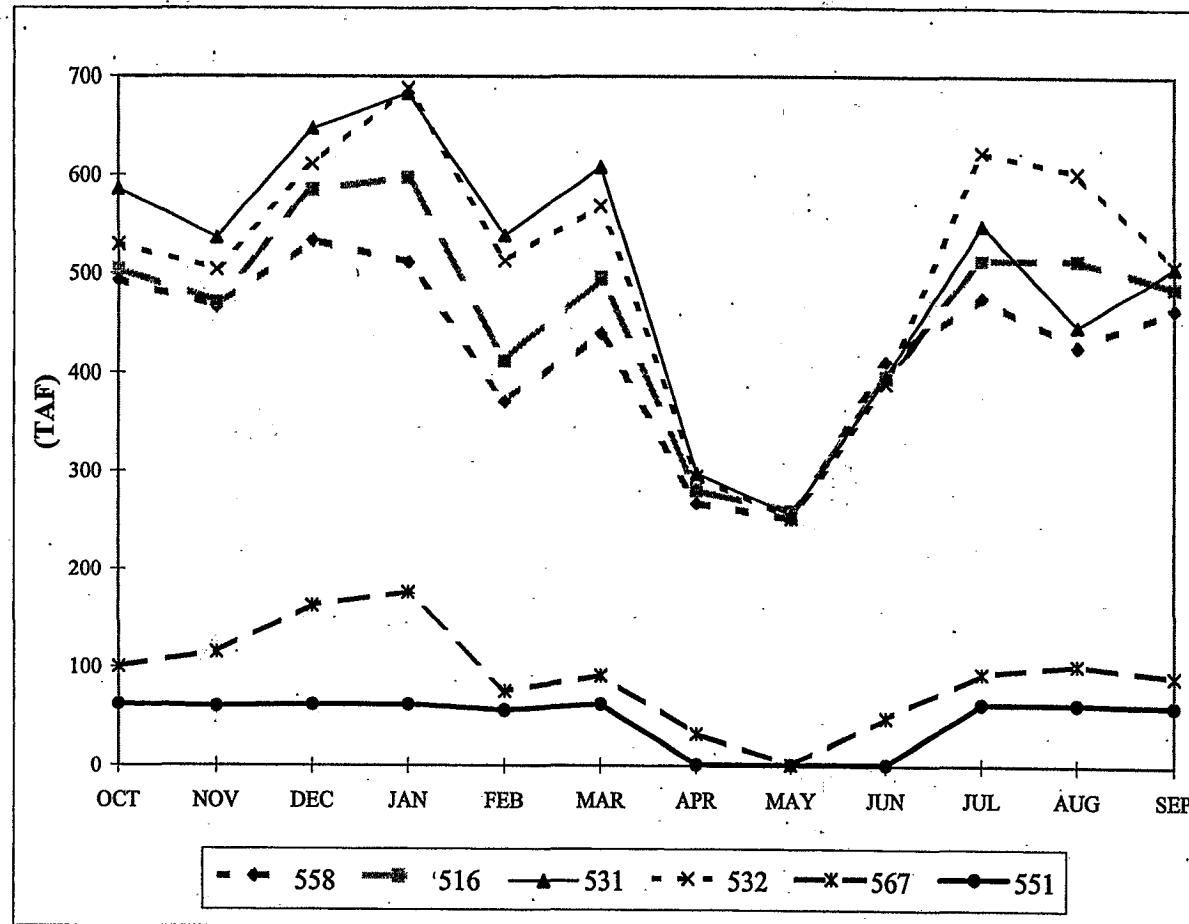


Case	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	SUMMAR	Case Description
558	13878.8	18473.5	24424.6	29200.0	37547.3	35837.5	23524.6	16060.1	19236.1	16216.7	12139.6	12710.3	21604.1	Existing Condition
516	13926.6	18707.7	24306.7	28475.3	37173.4	35717.6	23603.4	16032.7	18173.1	16925.2	13616.6	12440.3	21591.5	No Action
531	14922.7	19706.6	24459.2	28697.9	38216.2	36724.9	22844.0	16352.9	17758.2	17325.6	12374.4	12553.8	21828.0	Alt 1 w/Storage
532	13901.2	18610.1	24119.7	28429.5	38011.3	35977.8	22825.1	16310.2	17634.3	18542.4	14876.0	12268.1	21792.1	Alt 2 w/Storage
567	14323.0	19461.9	23876.8	26600.9	35920.0	36123.1	24201.1	16345.8	19155.2	17042.1	15129.1	12665.1	21737.0	Alt 3 w/Storage
551	13515.9	18655.2	25477.7	26521.6	33532.7	35603.7	24613.8	15858.9	20157.2	18952.0	15461.4	12423.5	21731.1	Alt 3 w/ 15K IF

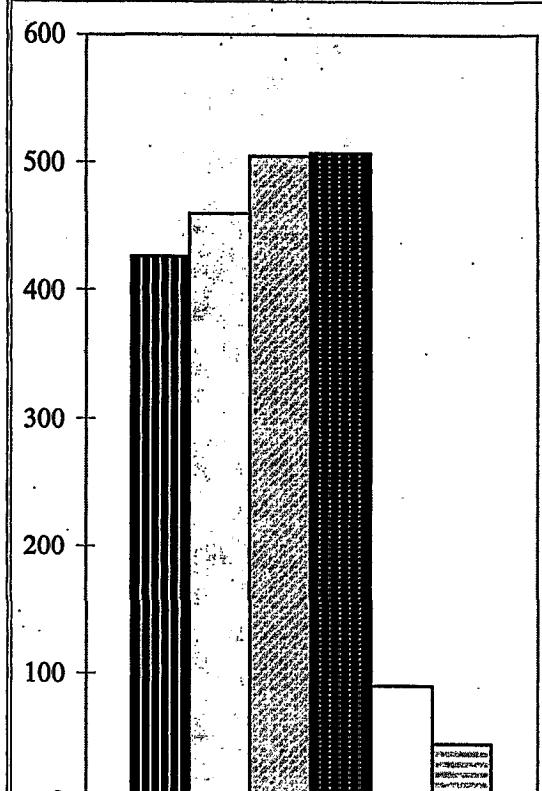
# Comparison of Total Exports From Delta Channels Under Various Delta Alternatives

Data Selected from WYear1975 thru 1991

Average Monthly Values



Average Annual Average Values



D - 0 1 0 5 9 9

Case	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	SUMMAR	Case Description
558	493.5	466.3	532.9	511.2	370.8	439.5	267.3	251.6	411.5	475.1	426.7	464.4	425.9	Existing Condition
516	504.1	471.4	584.9	597.2	412.3	495.5	280.6	259.3	395.8	512.9	513.1	485.8	459.4	No Action
531	586.0	536.1	647.3	682.8	538.3	607.7	297.9	255.8	396.9	548.0	447.1	506.4	504.2	Alt 1 w/Storage
532	529.6	503.8	611.1	688.4	512.9	568.3	294.6	252.4	389.3	622.6	601.6	507.8	506.9	Alt 2 w/Storage
567	100.4	115.2	162.6	176.5	75.6	91.4	32.3	1.1	48.4	93.1	101.9	90.6	90.8	Alt 3 w/Storage
551	61.9	59.9	61.6	61.8	56.0	61.9	1.0	1.0	1.0	62.0	61.9	60.0	45.8	Alt 3 w/ 15K IF

## **APPENDIX D**

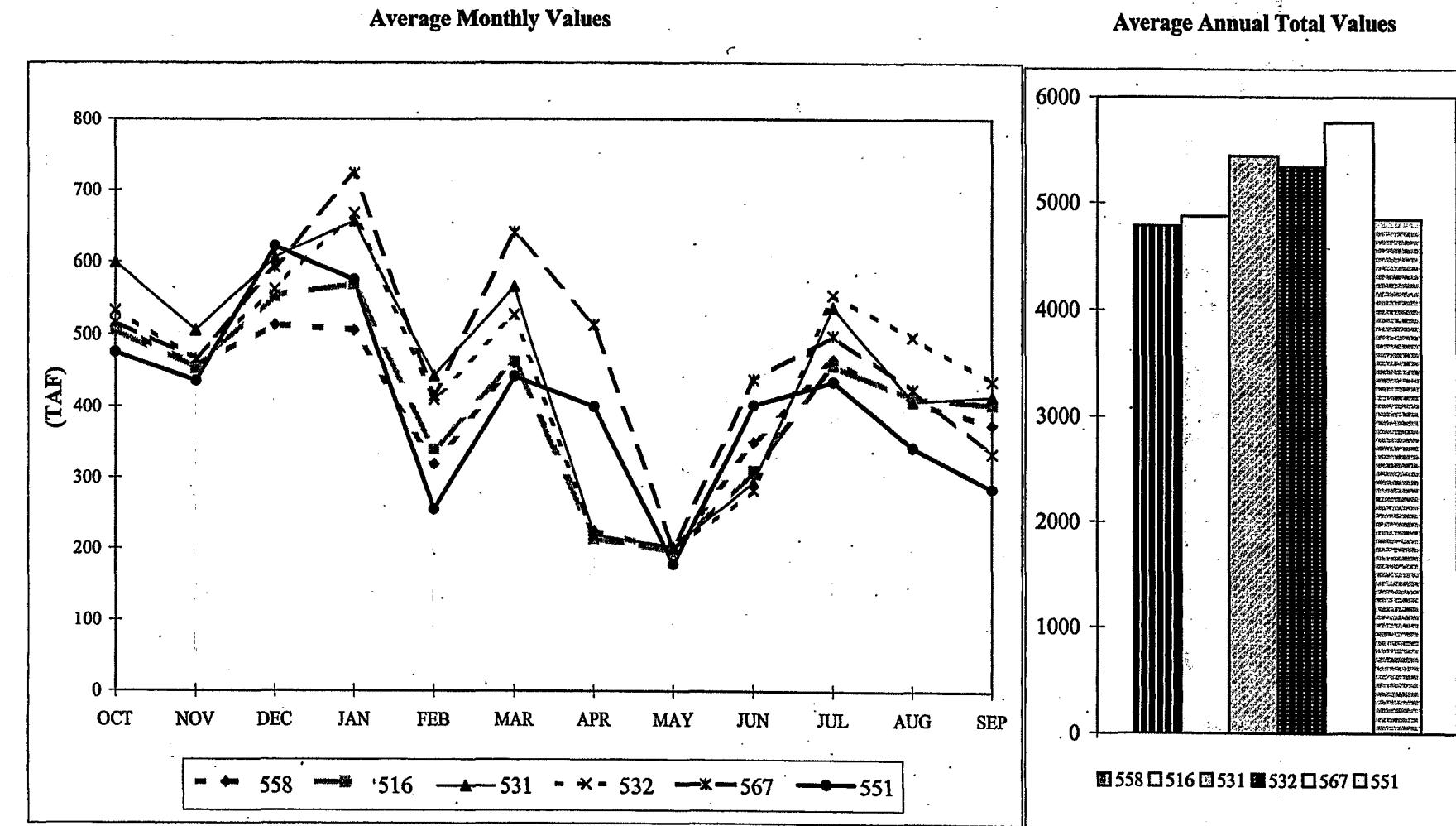
**1976 – 1991 (*Dry and Critical Years only*)**

### **DWRSIM AVERAGE MONTHLY VALUES**

**A COMPARISON OF EXISTING CONDITIONS (558),  
NO ACTION (516), ALTERNATIVE 1 (531),  
ALTERNATIVE 2 (532), ALTERNATIVE 3 –  
10,000 CFS (567), ALTERNATIVE 3 – 15,000 CFS (551)**

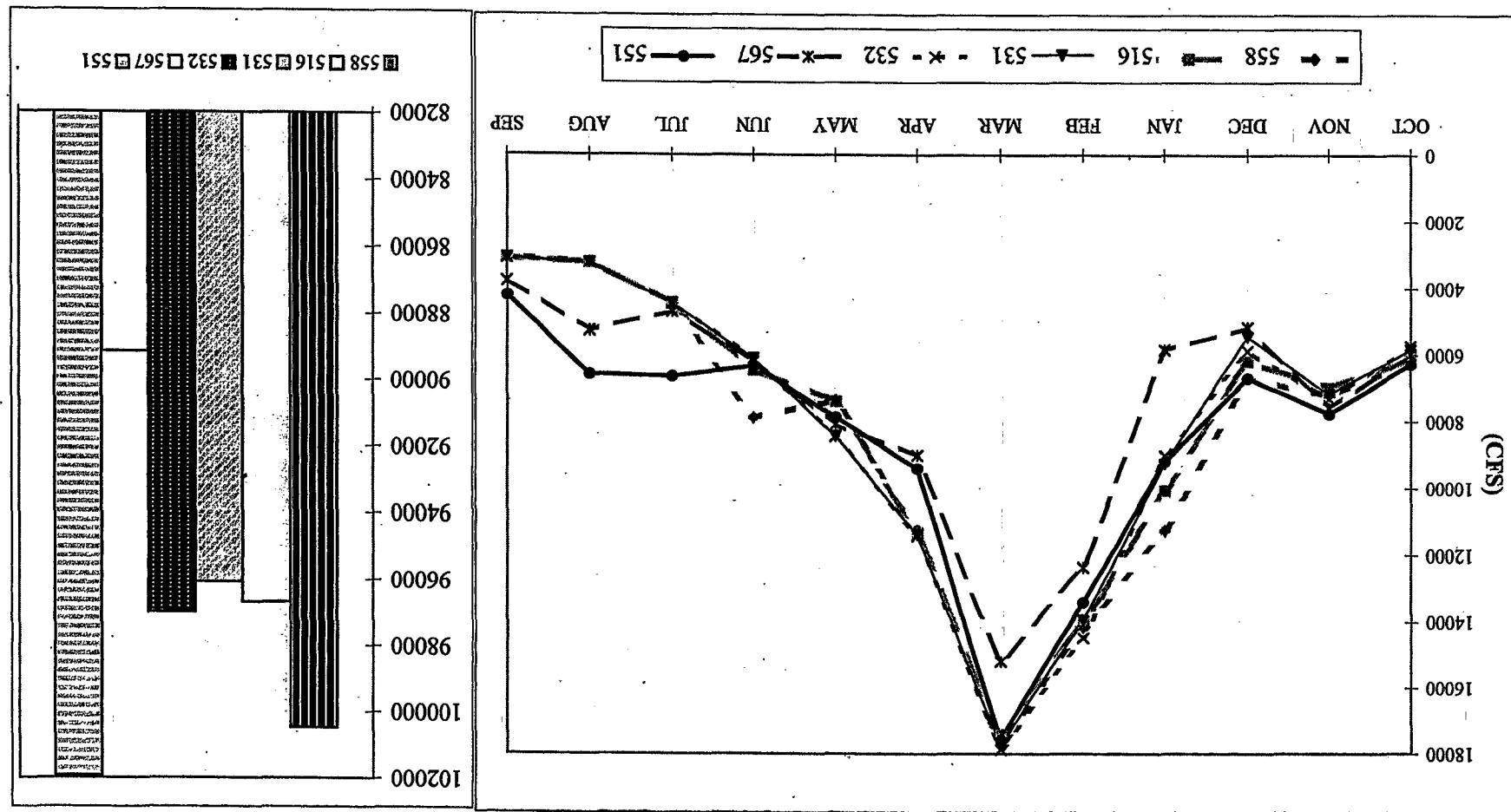
# Comparison of Total Delta Exports Under Various Delta Alternatives

Data Selected from WYear1975 thru 1991 & 4<=WYType<=5



Case	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	SUMMARY	Case Description
558	512.4	455.7	513.0	505.7	318.9	459.9	225.1	196.6	349.7	465.0	406.3	374.8	4783.0	Existing Condition
516	505.4	453.2	552.9	568.6	339.6	462.9	213.8	196.1	309.9	457.2	411.8	403.2	4874.6	No Action
531	599.1	505.8	606.0	656.2	443.0	565.8	219.0	201.8	293.8	537.4	407.2	414.7	5449.8	Alt 1 w/Storage
532	532.3	466.3	562.1	667.6	409.3	527.2	213.4	197.6	281.7	554.1	496.7	436.1	5344.4	Alt 2 w/Storage
567	516.0	466.4	592.2	723.7	415.0	640.3	512.9	200.3	437.6	498.1	424.0	334.6	5761.1	Alt 3 w/Storage
551	475.3	435.8	620.9	574.1	255.2	442.0	399.4	177.3	401.6	434.9	342.3	284.7	4843.6	Alt 3 w/ 15K IF

Case	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	UMMAF	Case Description
558	6207.2	7220.8	6707.8	11270.6	14178.2	17691.0	11248.5	7358.3	7894.9	4441.7	3216.5	3049.3	100484.8	Existing Condition
516	6125.9	6978.0	6178.3	10068.9	13998.0	17421.8	11323.2	7389.0	6458.9	4441.7	3216.5	3079.2	96679.5	No Action
531	5836.8	7164.8	5446.4	9259.3	13960.0	17743.4	11386.7	8433.5	6113.5	4441.7	3216.5	3079.2	96081.8	Alt 1 w/Storage
532	5735.6	7314.2	5876.5	9013.6	14484.5	17877.1	11407.2	8440.7	6109.8	4441.7	3216.5	3081.0	96998.4	Alt 2 w/Storage
532	5975.9	7594.2	5159.1	5842.2	12362.4	15200.9	9009.6	8092.0	6205.0	4682.1	3216.5	3081.0	98176.0	Alt 3 w/Storage
551	6270.5	6691.5	7762.3	9187.0	13409.4	17568.1	9409.2	7871.5	6318.9	6644.5	6572.2	4221.9	101927.2	Alt 3 w/15K IF

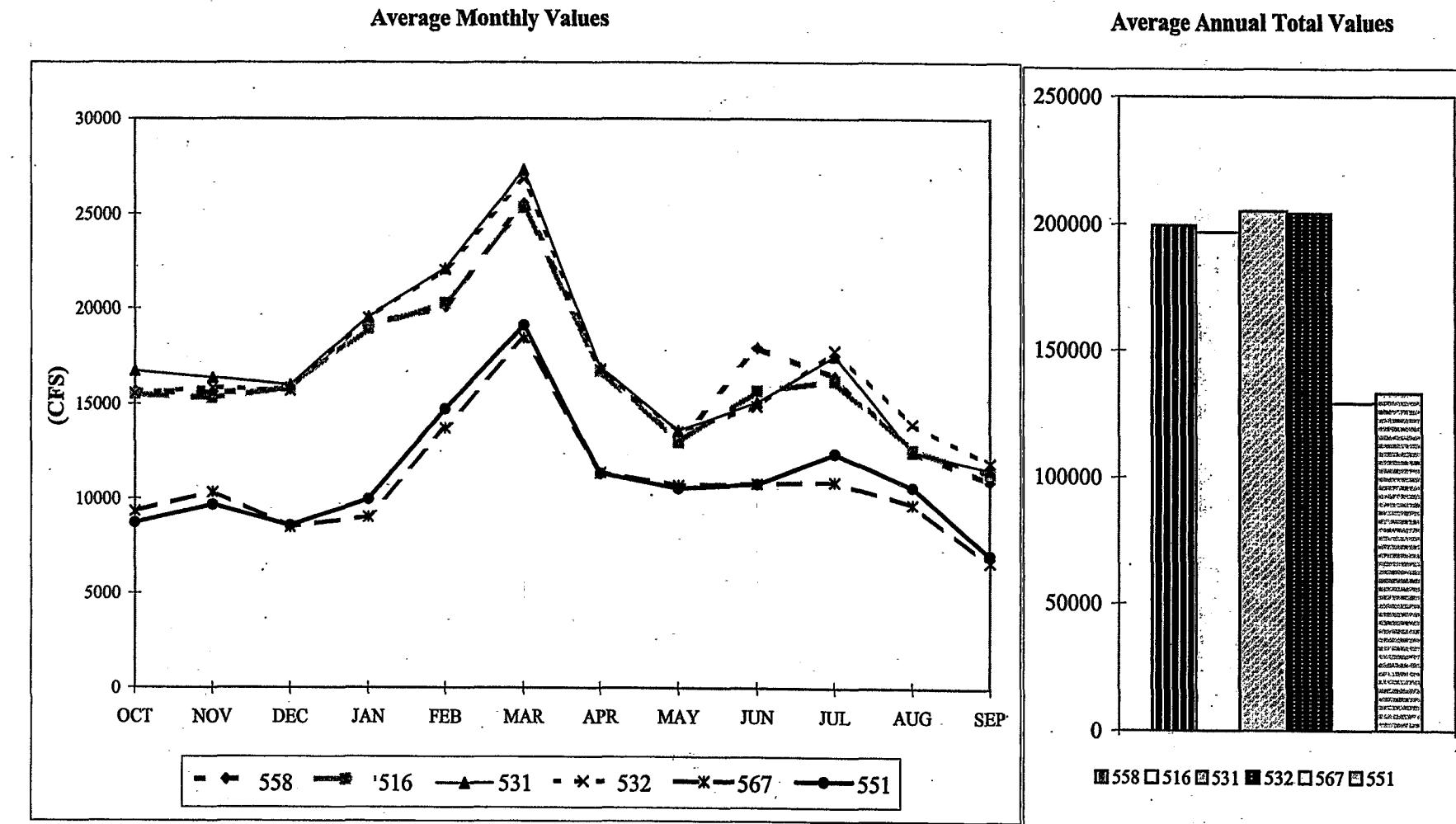


Comparison of Total Delta Outflow Under Various Delta Alternatives

Data Selected from Year 1975 thru 1991 &amp; 4&lt;=WYType&lt;=5

# Comparison of Total Delta Inflow Under Various Delta Alternatives

Data Selected from WYear1975 thru 1991 & 4<=WYType<=5

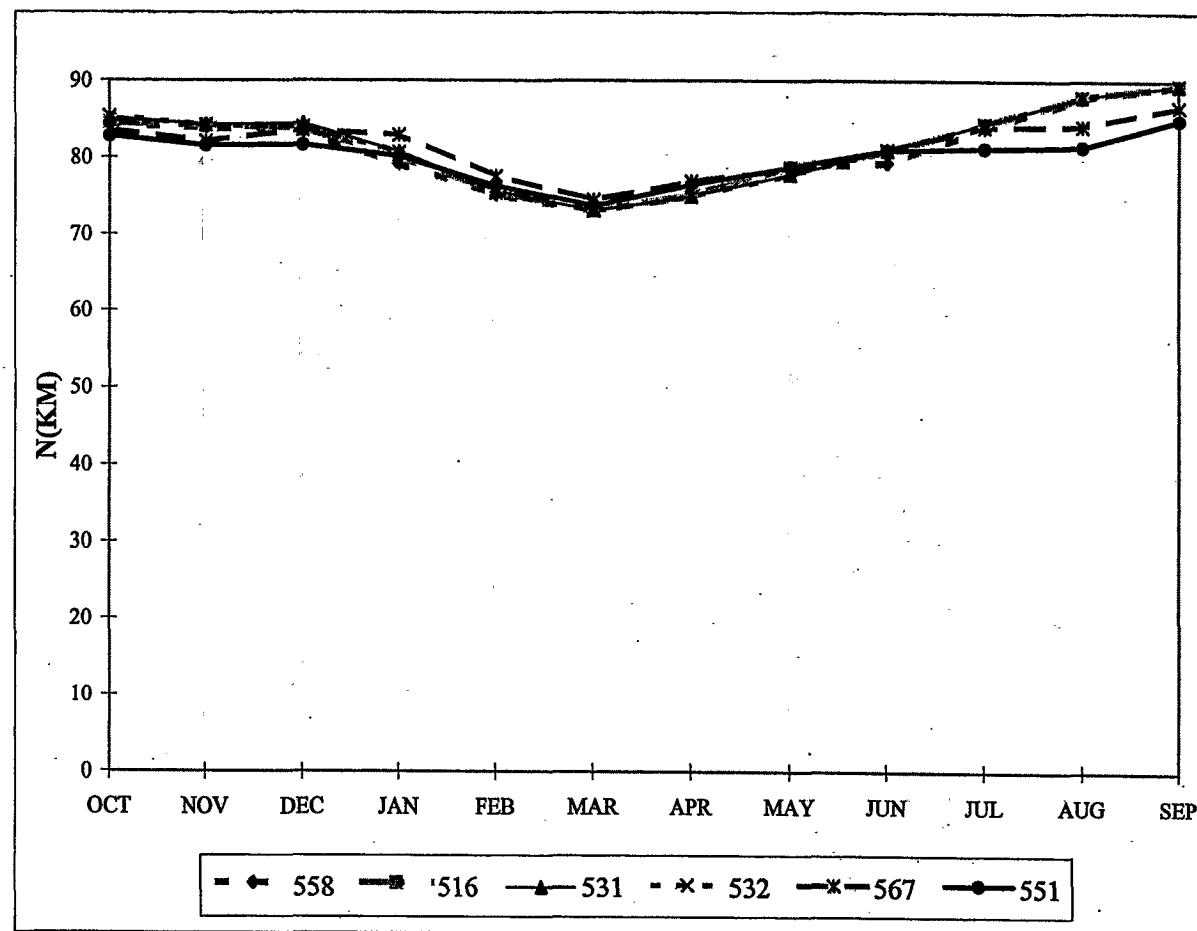


Case	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	SUMMARY	Case Description
558	15672.5	15584.4	15752.0	19133.0	20100.1	25567.9	16870.9	13019.8	17940.9	16444.1	12530.1	10934.8	199550.6	Existing Condition
516	15506.3	15294.9	15858.7	18948.7	20282.3	25333.0	16730.9	12960.2	15709.5	16218.3	12582.5	11360.6	196785.7	No Action
531	16735.1	16364.9	15992.4	19557.7	22108.1	27326.2	16882.1	13607.1	15093.3	17521.1	12506.6	11551.0	205245.5	Alt 1 w/Storage
532	15549.7	15855.1	15706.9	19499.9	22026.0	26831.1	16805.6	13533.0	14886.0	17790.4	13963.1	11917.0	204363.6	Alt 2 w/Storage
567	9326.2	10327.9	8489.5	9026.2	13731.7	18448.2	11369.9	10710.4	10802.2	10878.4	9676.7	6628.9	129416.3	Alt 3 w/Storage
551	8708.2	9678.1	8561.8	9967.7	14720.7	19118.6	11338.1	10536.9	10770.5	12369.3	10591.1	7026.6	133387.6	Alt 3 w/ 15K IF

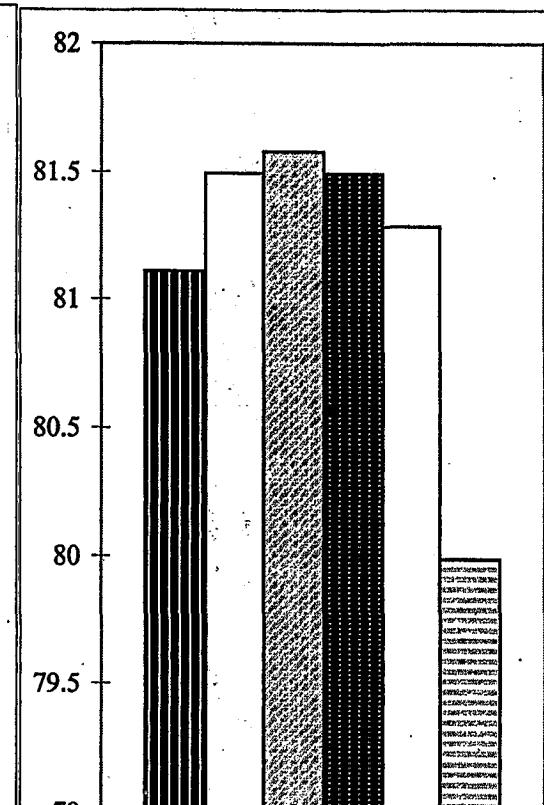
# Comparison of X2 Position Under Various Delta Alternatives

Data Selected from WYear1975 thru 1991 & 4<=WYType<=5

**Average Monthly Values**



**Average Annual Average Values**

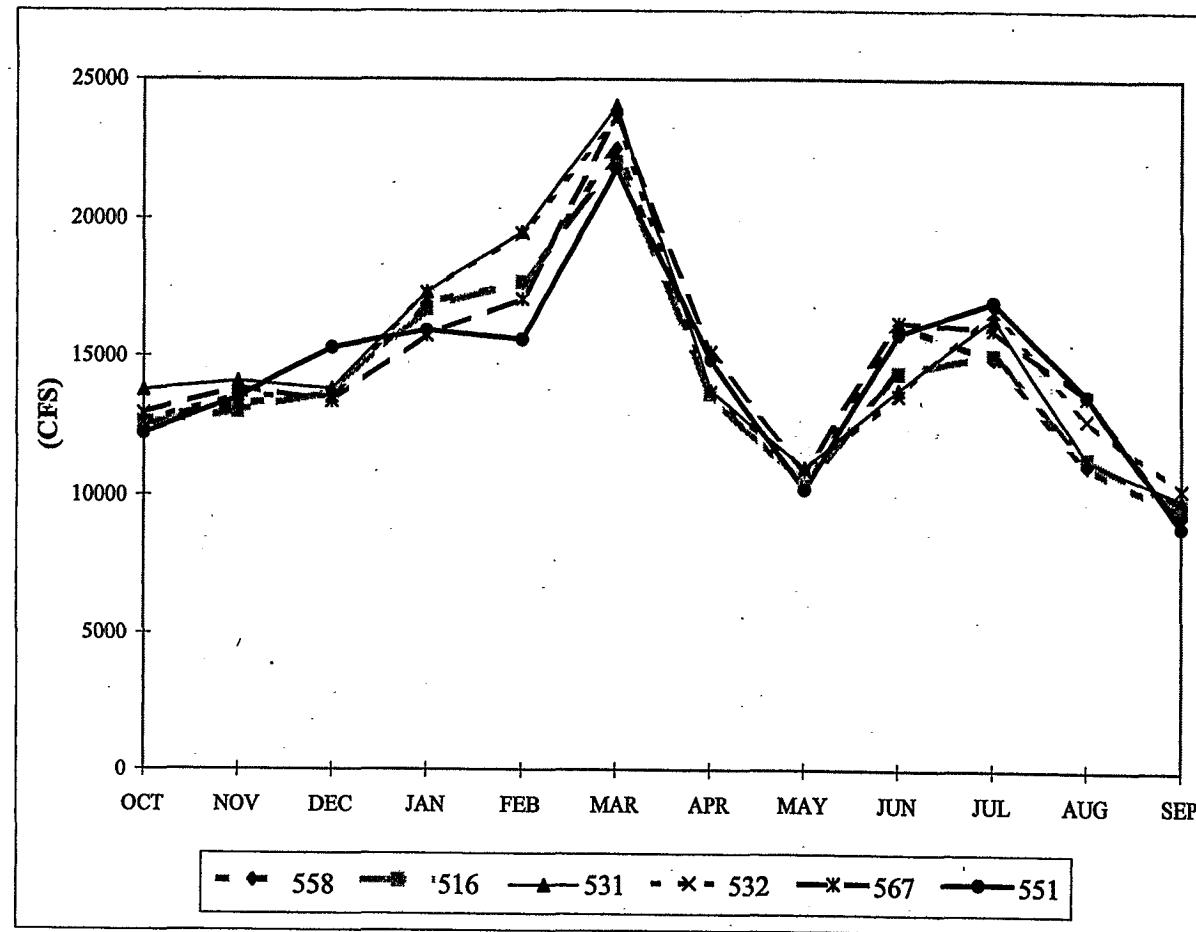


Case	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	SUMMAR	Case Description
558	84.4	83.9	83.2	79.2	75.2	73.1	75.1	78.8	79.4	83.9	87.8	89.5	81.1	Existing Condition
516	84.6	84.2	83.8	80.1	75.5	73.3	75.1	78.8	80.8	84.4	87.9	89.5	81.5	No Action
531	85.1	84.3	84.4	80.8	75.7	73.1	75.0	77.8	80.9	84.4	87.9	89.5	81.6	Alt 1 w/Storage
532	85.3	84.1	84.0	80.7	75.4	73.0	74.9	77.7	80.9	84.4	87.9	89.5	81.5	Alt 2 w/Storage
567	83.6	82.1	83.6	82.9	77.6	74.5	76.9	78.5	81.0	84.0	84.1	86.7	81.3	Alt 3 w/Storage
551	82.8	81.5	81.6	80.2	76.3	73.7	76.5	78.7	81.0	81.2	81.5	84.9	80.0	Alt 3 w/ 15K IF

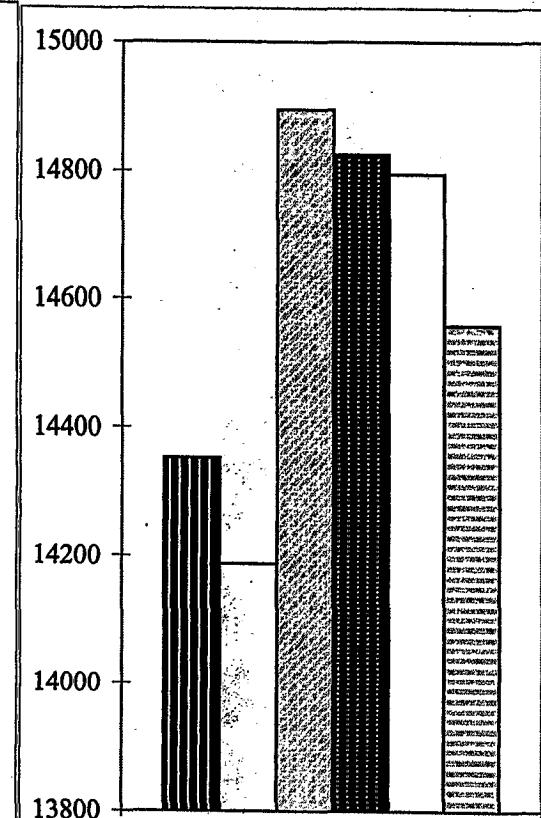
# Comparison of Flow at Freeport Under Various Delta Alternatives

Data Selected from WYear1975 thru 1991 & 4<=WYType<=5

**Average Monthly Values**



**Average Annual Average Values**



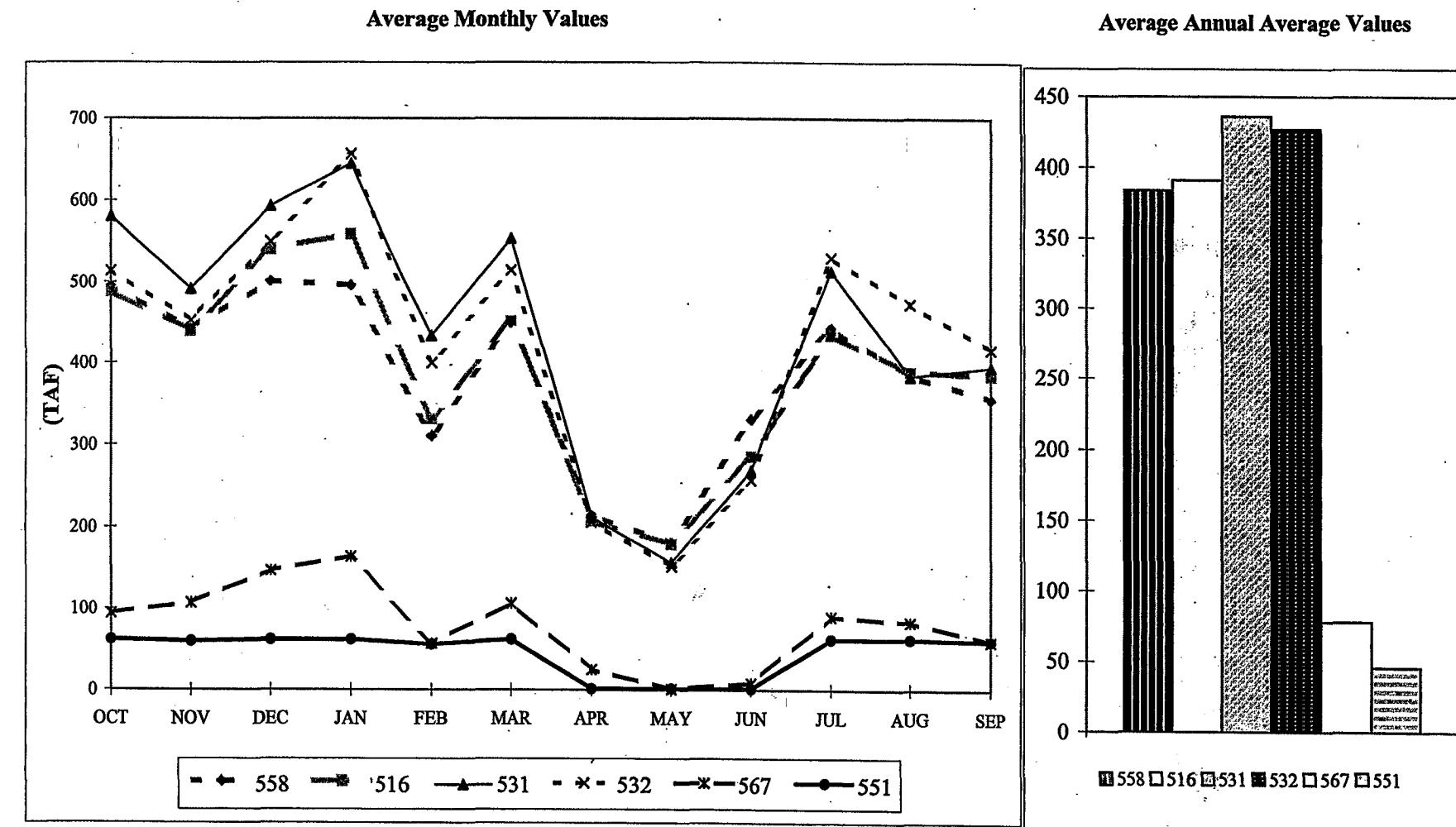
Case	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	SUMMAR	Case Description
558	12662.0	13240.9	13589.0	16910.4	17635.6	22523.1	13717.1	10318.2	16176.3	14924.4	11104.3	9429.8	14352.6	Existing Condition
516	12530.1	13009.4	13679.4	16708.0	17677.7	22058.6	13631.2	10381.5	14400.5	15072.6	11377.2	9721.1	14187.3	No Action
531	13767.9	14081.2	13809.5	17322.4	19505.5	24053.6	13782.4	11012.2	13789.9	16375.5	11306.7	9922.7	14894.1	Alt 1 w/Storage
532	12607.8	13564.0	13529.4	17284.4	19455.5	23562.1	13705.9	10936.3	13578.9	16642.9	12756.0	10279.4	14825.2	Alt 2 w/Storage
567	12927.6	13853.4	13361.3	15746.6	17057.1	23676.0	15153.0	10885.7	16224.8	15968.9	13561.9	9121.7	14794.8	Alt 3 w/Storage
551	12199.4	13506.1	15294.9	15916.5	15591.6	21803.9	14863.6	10218.9	15812.2	16959.2	13614.3	8912.5	14557.7	Alt 3 w/ 15K IF

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# Comparison of Total Exports From Delta Channels Under Various Delta Alternatives

Data Selected from WYear1975 thru 1991 & 4<=WYType<=5



Case	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	SUMMAR	Case Description
558	495.1	441.8	501.1	496.1	311.0	449.4	214.1	180.0	331.1	443.0	384.8	356.1	383.6	Existing Condition
516	487.8	439.4	540.9	558.8	331.1	451.9	207.3	178.7	285.9	434.8	389.1	385.0	390.9	No Action
531	580.8	491.9	593.6	645.6	433.4	553.8	211.7	155.8	269.1	514.0	383.6	395.4	435.7	Alt 1 w/Storage
532	513.9	452.4	549.8	656.6	400.0	514.9	206.0	150.9	256.8	530.6	472.9	416.9	426.8	Alt 2 w/Storage
567	94.1	106.9	146.1	163.4	57.0	105.9	24.6	0.8	7.7	90.1	83.2	59.9	78.3	Alt 3 w/Storage
551	61.9	59.9	61.7	61.6	56.0	61.9	1.0	1.0	1.0	62.0	61.9	60.0	45.8	Alt 3 w/ 15K IF

## **APPENDIX E**

### **ERPP FLOW ACQUISITIONS (STUDIES 518 AND 517)**

**DATA TABLES FOR CRITICAL, DRY, BELOW  
NORMAL, ABOVE NORMAL AND WET WATER  
YEARS**

# Summary of ERPP Modeling Results

## Proposed ERPP Water Acquisitions for Sacramento and San Joaquin River Systems By Water Year Type from 1922-1994 (73 Year Period)

	(Thousand Acre-Feet)											
	Cri		Dry		BN		AN		Wet		Total	
	Ave	Max	Ave	Max	Ave	Max	Ave	Max	Ave	Max	Ave	Max
<b>ERPP Water Aquisition Locations</b>												
- Sacramento River (CP 151)	0	0	4	35	89	191	25	128	0	0	21	191
- Feather River (CP 153)	0	0	58	84	83	124	56	164	0	0	36	164
- Yuba River (CP 152)	0	0	7	50	2	21	7	69	0	0	3	69
- American River (CP 157)	0	0	24	46	41	60	11	33	41	89	26	89
- Sacramento River below Freeport (CP 154)	0	0	86	246	33	188	0	0	3	40	26	246
- Sacramento River above Hood (CP 150)	1	9	28	177	25	185	2	21	14	144	15	185
- Stanislaus River (CP 651)	0	0	7	31	22	40	32	40	36	40	21	40
- Tuolumne River (CP 155)	3	32	32	64	49	80	64	80	42	80	38	80
- Merced River (CP 156)	0	0	15	48	26	48	45	64	37	64	25	64
<b>ERPP Basin Subtotal</b>												
- Sacramento Basin	1	9	206	391	273	444	100	246	58	272	128	444
- San Joaquin Basin	3	32	54	143	98	152	141	184	114	184	83	184
<b>Total ERPP Water Aquisitions</b>												
	14	62	260	393	367	444	241	245	173	212	111	444

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## Preliminary ERPP Modeling Results and SWP/CVP System Evaluation

**Total Outflow with ERPP flow targets (Study 518) - Critical Years**  
(Thousand Acre-Feet)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
1924	246	268	277	366	606	621	349	424	410	246	184	179	4176
1929	246	276	323	394	638	631	410	364	384	246	184	179	4275
1931	246	268	277	364	433	382	406	430	410	246	184	179	3825
1933	246	268	277	401	417	517	600	415	367	246	184	179	4117
1934	345	208	309	525	684	701	595	348	410	246	184	179	4734
1976	846	389	391	443	674	743	465	375	410	246	184	179	5345
1977	335	208	215	291	666	370	414	424	410	246	184	179	3942
1988	246	268	491	1168	633	485	464	390	410	246	184	179	5164
1990	246	268	277	856	637	556	586	352	413	246	184	179	4800
1991	335	208	215	292	665	1498	796	402	359	246	184	179	5379
1992	340	208	215	293	1646	936	639	461	365	246	184	179	5712
1994	446	268	388	476	1135	682	551	388	398	246	184	179	5341
<b>Average</b>	<b>344</b>	<b>259</b>	<b>305</b>	<b>489</b>	<b>736</b>	<b>677</b>	<b>523</b>	<b>398</b>	<b>396</b>	<b>246</b>	<b>184</b>	<b>179</b>	<b>4734</b>

**Total ERPP Acquisitions - Critical Years**  
(Thousand Acre-Feet)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
1924	0	0	0	0	0	0	0	0	0	0	0	0	0
1929	0	0	0	0	0	0	0	0	0	0	0	0	0
1931	0	0	0	0	0	0	0	0	0	0	0	0	0
1933	0	0	0	0	0	0	0	41	0	0	0	0	41
1934	0	0	0	0	0	0	0	0	0	0	0	0	0
1976	0	0	0	0	0	0	0	0	0	0	0	0	0
1977	0	0	0	0	0	0	0	0	0	0	0	0	0
1988	0	0	0	0	0	0	0	0	0	0	0	0	0
1990	0	0	0	0	0	0	0	0	0	0	0	0	0
1991	0	0	0	0	0	0	0	0	0	0	0	0	0
1992	0	0	0	0	0	0	0	0	0	0	0	0	0
1994	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Average</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>						

## Preliminary ERPP Modeling Results and SWP/CVP System Evaluation

**Total Outflow with ERPP flow targets (Study 518) - Dry Years**  
(Thousand Acre-Feet)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
1925	335	208	326	369	3083	1677	1358	872	602	307	215	179	9531
1926	246	268	277	614	1864	844	1200	660	327	307	215	179	7001
1930	349	208	393	904	722	1565	726	652	344	307	215	179	6564
1932	336	208	695	709	1131	868	666	857	666	307	215	179	6837
1939	767	401	447	528	613	923	594	603	341	307	215	179	5918
1944	268	278	306	620	1385	1314	635	742	558	307	215	179	6807
1947	246	335	639	400	788	1139	706	578	335	307	215	179	5867
1949	266	268	420	399	687	2779	1124	722	568	307	215	179	7934
1955	246	522	1059	1070	633	821	597	665	525	307	215	179	6839
1960	246	268	277	396	1283	1065	671	616	347	307	215	179	5870
1961	246	308	480	473	1485	1072	581	636	336	307	215	179	6318
1964	670	1333	346	1149	721	817	488	643	351	307	215	179	7219
1981	272	268	397	1134	1306	1576	898	588	318	307	215	179	7458
1985	504	1666	942	521	705	989	659	681	333	307	215	179	7701
1987	273	268	277	657	1025	1527	590	568	339	307	215	179	6225
1989	335	208	215	291	665	2208	1184	618	328	307	215	218	6792
Average	350	438	469	640	1131	1324	792	669	414	307	215	181	6930

**Total ERPP Acquisitions - Dry Years**  
(Thousand Acre-Feet)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
1925	0	0	0	0	0	3	0	177	0	0	0	0	180
1926	0	0	0	0	0	184	0	48	0	0	0	0	232
1930	0	0	0	0	0	101	0	0	0	0	0	0	101
1932	0	0	0	0	0	173	0	240	0	0	0	0	413
1939	0	0	0	0	0	147	0	174	0	0	0	0	321
1944	0	0	0	0	0	95	0	327	0	0	0	0	422
1947	0	0	0	0	0	103	0	179	0	0	0	0	282
1949	0	0	0	0	0	85	0	189	0	0	0	0	274
1955	0	0	0	0	0	195	0	165	0	0	0	0	360
1960	0	0	0	0	0	79	0	0	0	0	0	0	79
1961	0	0	0	0	0	145	0	246	0	0	0	0	391
1964	0	0	0	0	0	197	0	139	0	0	0	0	336
1981	0	0	0	0	0	40	0	148	0	0	0	0	188
1985	0	0	0	0	0	114	0	64	0	0	0	0	178
1987	0	0	0	0	0	95	0	229	0	0	0	0	324
1989	0	0	0	0	0	84	0	0	0	0	0	0	84
Average	0	0	0	0	0	115	0	145	0	0	0	0	260

## Preliminary ERPP Modeling Results and SWP/CVP System Evaluation

**Total Outflow with ERPP flow targets (Study 518) - Below Normal Years**  
(Thousand Acre-Feet)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
1923	361	505	1874	1839	1296	1100	1584	913	593	400	246	179	10890
1935	335	208	215	1351	633	1651	2796	1696	627	400	246	179	10337
1936	246	268	277	1634	4140	1858	1445	1088	563	400	246	179	12344
1937	246	268	307	606	2443	2889	1600	1084	594	400	246	179	10862
1945	246	358	481	369	2483	1649	866	873	641	400	246	179	8791
1946	337	549	4009	2638	1362	1234	848	873	617	400	246	179	13292
1948	246	268	277	349	633	1149	1477	1666	695	400	246	213	7619
1950	246	268	277	855	1510	1306	1124	781	629	400	246	188	7830
1959	716	293	297	1752	2684	1473	642	608	324	400	271	223	9683
1962	246	268	432	369	2964	1813	782	718	496	400	246	179	8913
1966	256	1050	538	1359	1199	1474	708	738	352	400	261	179	8514
1968	871	340	463	1502	3320	2142	804	615	329	400	269	179	11234
1972	506	284	626	623	988	1667	588	621	383	400	260	179	7125
1979	307	285	277	1265	2141	2083	1156	872	662	400	246	179	9873
<b>Average</b>	369	372	739	1179	1985	1678	1173	939	536	400	252	185	9808

**Total ERPP Acquisitions - Below Normal Years**  
(Thousand Acre-Feet)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
1923	0	0	0	0	0	355	0	121	0	0	0	0	476
1935	0	0	0	0	0	289	0	89	0	0	0	0	378
1936	0	0	0	0	0	303	0	89	0	0	0	0	392
1937	0	0	0	0	0	155	0	152	0	0	0	0	307
1945	0	0	0	0	0	285	0	257	0	0	0	0	542
1946	0	0	0	0	0	291	0	258	0	0	0	0	549
1948	0	0	0	0	0	352	0	127	0	0	0	0	479
1950	0	0	0	0	0	303	0	79	0	0	0	0	382
1959	0	0	0	0	0	178	0	177	0	0	0	0	355
1962	0	0	0	0	0	180	0	80	0	0	0	0	260
1966	0	0	0	0	0	177	0	127	0	0	0	0	304
1968	0	0	0	0	0	76	0	252	0	0	0	0	328
1972	0	0	0	0	0	85	0	64	0	0	0	0	149
1979	0	0	0	0	0	131	0	160	0	0	0	0	291
<b>Average</b>	0	0	0	0	0	226	0	145	0	0	0	0	371

## Preliminary ERPP Modeling Results and SWP/CVP System Evaluation

**Total Outflow with ERPP flow targets (Study 518) - Above Normal Years**  
(Thousand Acre-Feet)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
1922	246	268	678	762	1981	1969	1516	2756	1812	492	246	202	12928
1928	372	868	578	1131	1068	5610	1728	1029	418	492	303	179	13776
1940	246	268	277	1437	3053	6084	4187	1068	492	492	293	179	18076
1951	253	2452	5380	4105	3528	1994	901	979	489	492	295	181	21049
1954	470	558	279	1349	3147	2849	2460	1298	441	492	297	179	13819
1957	700	271	277	545	1443	2458	1120	973	613	492	282	179	9353
1973	277	864	1062	4503	5098	3682	1281	932	622	492	282	189	19284
1978	335	208	319	3554	3335	4454	2773	1424	683	492	273	218	18068
1980	284	415	866	5664	7604	3971	1300	1102	710	492	272	241	22921
1993	336	209	420	3209	2939	2759	2510	1855	1365	492	246	246	16586
<b>Average</b>	<b>352</b>	<b>638</b>	<b>1014</b>	<b>2626</b>	<b>3320</b>	<b>3583</b>	<b>1978</b>	<b>1342</b>	<b>765</b>	<b>492</b>	<b>279</b>	<b>199</b>	<b>16586</b>

**Total ERPP Acquisitions - Above Normal Years**  
(Thousand Acre-Feet)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
1922	0	0	0	0	0	234	0	184	0	0	0	0	418
1928	0	0	0	0	0	0	0	127	0	0	0	0	127
1940	0	0	0	0	0	0	0	89	0	0	0	0	89
1951	0	0	0	0	0	246	0	121	0	0	0	0	367
1954	0	0	0	0	0	9	0	142	0	0	0	0	151
1957	0	0	0	0	0	48	0	137	0	0	0	0	185
1973	0	0	0	0	0	79	0	89	0	0	0	0	168
1978	0	0	0	0	0	164	0	184	0	0	0	0	348
1980	0	0	0	0	0	107	0	184	0	0	0	0	291
1993	0	0	0	0	0	114	0	152	0	0	0	0	266
<b>Average</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>100</b>	<b>0</b>	<b>141</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>241</b>

## Preliminary ERPP Modeling Results and SWP/CVP System Evaluation

**Total Outflow with ERPP flow targets (Study 518) - Wet Years**  
(Thousand Acre-Feet)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
1927	246	814	345	1548	6713	2450	3023	1423	576	492	321	210	18161
1938	246	952	3326	1503	7601	10585	4659	4808	2069	492	274	397	36912
1941	246	268	2621	5963	6767	5757	4891	3005	980	492	297	386	31673
1942	665	397	3541	4872	7709	1793	3191	2396	1096	492	293	297	26742
1943	640	589	1184	4992	2971	5377	2018	1208	493	492	329	179	20472
1952	259	456	2552	5522	4218	4016	4272	4624	2044	492	274	586	29315
1953	810	421	2357	6222	1443	1298	981	1384	768	492	309	471	16956
1956	246	268	5088	10322	4842	2299	1228	2644	986	492	297	514	29226
1958	687	571	956	1978	8558	7700	6325	3453	1949	492	275	641	33585
1963	1582	618	1106	695	3552	1690	5582	1836	646	492	315	242	18356
1965	246	298	4383	7187	1674	1221	2837	1429	701	492	312	234	21014
1967	246	573	2113	2868	2703	3536	3567	3694	2713	623	246	743	23625
1969	246	317	1054	7271	7871	4293	3666	4195	1620	492	280	680	31985
1970	862	484	3194	12833	5045	2514	878	873	395	492	345	179	28094
1971	246	888	3589	2812	1369	2410	1214	1583	650	492	315	505	16073
1974	545	3337	4146	7878	2195	6698	4311	1685	833	492	304	664	33088
1975	593	401	580	617	3245	5377	1745	1612	1093	492	294	602	16651
1982	246	1644	4838	4726	5616	5348	8594	3080	1146	492	291	948	36969
1983	1488	2601	5141	6505	10291	15623	6179	4731	4881	1472	633	1387	60932
1984	1273	4828	9592	4512	2356	2174	970	873	604	492	324	179	28177
1986	246	268	440	1003	11874	9436	1605	1054	630	492	319	244	27611
Average	565	1000	2959	4849	5172	4838	3416	2457	1280	545	317	490	27887

**Total ERPP Acquisitions - Wet Years**  
(Thousand Acre-Feet)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
1927	0	0	0	0	0	40	0	105	0	0	0	0	145
1938	0	0	0	0	0	0	0	40	0	0	0	0	40
1941	0	0	0	0	0	43	0	88	0	0	0	0	131
1942	0	0	0	0	0	64	0	136	0	0	0	0	200
1943	0	0	0	0	0	0	0	168	0	0	0	0	168
1952	0	0	0	0	0	18	0	40	0	0	0	0	58
1953	0	0	0	0	0	89	0	138	0	0	0	0	227
1956	0	0	0	0	0	79	0	152	0	0	0	0	231
1958	0	0	0	0	0	5	0	56	0	0	0	0	61
1963	0	0	0	0	0	79	0	105	0	0	0	0	184
1965	0	0	0	0	0	89	0	184	0	0	0	0	273
1967	0	0	0	0	0	15	0	120	0	0	0	0	135
1969	0	0	0	0	0	50	0	40	0	0	0	0	90
1970	0	0	0	0	0	89	0	304	0	0	0	0	393
1971	0	0	0	0	0	60	0	139	0	0	0	0	199
1974	0	0	0	0	0	0	0	150	0	0	0	0	150
1975	0	0	0	0	0	47	0	184	0	0	0	0	231
1982	0	0	0	0	0	0	0	56	0	0	0	0	56
1983	0	0	0	0	0	0	0	104	0	0	0	0	104
1984	0	0	0	0	0	89	0	293	0	0	0	0	382
1986	0	0	0	0	0	0	0	152	0	0	0	0	152
Average	0	0	0	0	0	41	0	131	0	0	0	0	172

# Preliminary ERPP Modeling Results and SWP/CVP System Evaluation

## Sacramento River Basin Monthly ERPP Water Acquisitions - Critical Years (Thousand Acre-Feet)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
1924	0	0	0	0	0	0	0	0	0	0	0	0	0
1929	0	0	0	0	0	0	0	0	0	0	0	0	0
1931	0	0	0	0	0	0	0	0	0	0	0	0	0
1933	0	0	0	0	0	0	0	9	0	0	0	0	9
1934	0	0	0	0	0	0	0	0	0	0	0	0	0
1976	0	0	0	0	0	0	0	0	0	0	0	0	0
1977	0	0	0	0	0	0	0	0	0	0	0	0	0
1988	0	0	0	0	0	0	0	0	0	0	0	0	0
1990	0	0	0	0	0	0	0	0	0	0	0	0	0
1991	0	0	0	0	0	0	0	0	0	0	0	0	0
1992	0	0	0	0	0	0	0	0	0	0	0	0	0
1994	0	0	0	0	0	0	0	0	0	0	0	0	0
Average	0	0	0	0	0	0	0	1	0	0	0	0	1

## San Joaquin River Basin Monthly ERPP Water Acquisitions - Critical Years (Thousand Acre-Feet)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
1924	0	0	0	0	0	0	0	0	0	0	0	0	0
1929	0	0	0	0	0	0	0	0	0	0	0	0	0
1931	0	0	0	0	0	0	0	0	0	0	0	0	0
1933	0	0	0	0	0	0	0	32	0	0	0	0	32
1934	0	0	0	0	0	0	0	0	0	0	0	0	0
1976	0	0	0	0	0	0	0	0	0	0	0	0	0
1977	0	0	0	0	0	0	0	0	0	0	0	0	0
1988	0	0	0	0	0	0	0	0	0	0	0	0	0
1990	0	0	0	0	0	0	0	0	0	0	0	0	0
1991	0	0	0	0	0	0	0	0	0	0	0	0	0
1992	0	0	0	0	0	0	0	0	0	0	0	0	0
1994	0	0	0	0	0	0	0	0	0	0	0	0	0
Average	0	0	0	0	0	0	0	3	0	0	0	0	3

## Preliminary ERPP Modeling Results and SWP/CVP System Evaluation

**Sacramento River Basin Monthly ERPP Water Acquisitions - Dry Years**  
(Thousand Acre-Feet)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
1925	0	0	0	0	0	3	0	50	0	0	0	0	53
1926	0	0	0	0	0	184	0	0	0	0	0	0	184
1930	0	0	0	0	0	101	0	0	0	0	0	0	101
1932	0	0	0	0	0	173	0	151	0	0	0	0	324
1939	0	0	0	0	0	147	0	110	0	0	0	0	257
1944	0	0	0	0	0	95	0	184	0	0	0	0	279
1947	0	0	0	0	0	103	0	115	0	0	0	0	218
1949	0	0	0	0	0	85	0	78	0	0	0	0	163
1955	0	0	0	0	0	195	0	101	0	0	0	0	296
1960	0	0	0	0	0	79	0	0	0	0	0	0	79
1961	0	0	0	0	0	145	0	246	0	0	0	0	391
1964	0	0	0	0	0	197	0	107	0	0	0	0	304
1981	0	0	0	0	0	40	0	84	0	0	0	0	124
1985	0	0	0	0	0	114	0	0	0	0	0	0	114
1987	0	0	0	0	0	95	0	229	0	0	0	0	324
1989	0	0	0	0	0	84	0	0	0	0	0	0	84
Average	0	0	0	0	0	115	0	91	0	0	0	0	206

**San Joaquin River Basin Monthly ERPP Water Acquisitions - Dry Years**  
(Thousand Acre-Feet)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
1925	0	0	0	0	0	0	0	127	0	0	0	0	127
1926	0	0	0	0	0	0	0	48	0	0	0	0	48
1930	0	0	0	0	0	0	0	0	0	0	0	0	0
1932	0	0	0	0	0	0	0	89	0	0	0	0	89
1939	0	0	0	0	0	0	0	64	0	0	0	0	64
1944	0	0	0	0	0	0	0	143	0	0	0	0	143
1947	0	0	0	0	0	0	0	64	0	0	0	0	64
1949	0	0	0	0	0	0	0	111	0	0	0	0	111
1955	0	0	0	0	0	0	0	64	0	0	0	0	64
1960	0	0	0	0	0	0	0	0	0	0	0	0	0
1961	0	0	0	0	0	0	0	0	0	0	0	0	0
1964	0	0	0	0	0	0	0	32	0	0	0	0	32
1981	0	0	0	0	0	0	0	64	0	0	0	0	64
1985	0	0	0	0	0	0	0	64	0	0	0	0	64
1987	0	0	0	0	0	0	0	0	0	0	0	0	0
1989	0	0	0	0	0	0	0	0	0	0	0	0	0
Average	0	0	0	0	0	0	0	54	0	0	0	0	54

# Preliminary ERPP Modeling Results and SWP/CVP System Evaluation

**Sacramento River Basin Monthly ERPP Water Acquisitions - Below Normal Years**  
(Thousand Acre-Feet)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
1923	0	0	0	0	0	355	0	0	0	0	0	0	355
1935	0	0	0	0	0	289	0	0	0	0	0	0	289
1936	0	0	0	0	0	303	0	0	0	0	0	0	303
1937	0	0	0	0	0	155	0	0	0	0	0	0	155
1945	0	0	0	0	0	285	0	136	0	0	0	0	421
1946	0	0	0	0	0	291	0	153	0	0	0	0	444
1948	0	0	0	0	0	352	0	0	0	0	0	0	352
1950	0	0	0	0	0	303	0	0	0	0	0	0	303
1959	0	0	0	0	0	178	0	113	0	0	0	0	291
1962	0	0	0	0	0	180	0	1	0	0	0	0	181
1966	0	0	0	0	0	177	0	0	0	0	0	0	177
1968	0	0	0	0	0	76	0	188	0	0	0	0	264
1972	0	0	0	0	0	85	0	0	0	0	0	0	85
1979	0	0	0	0	0	131	0	71	0	0	0	0	202
<b>Average</b>	0	0	0	0	0	226	0	47	0	0	0	0	273

**San Joaquin River Basin Monthly ERPP Water Acquisitions - Below Normal Years**  
(Thousand Acre-Feet)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
1923	0	0	0	0	0	0	0	121	0	0	0	0	121
1935	0	0	0	0	0	0	0	89	0	0	0	0	89
1936	0	0	0	0	0	0	0	89	0	0	0	0	89
1937	0	0	0	0	0	0	0	152	0	0	0	0	152
1945	0	0	0	0	0	0	0	121	0	0	0	0	121
1946	0	0	0	0	0	0	0	105	0	0	0	0	105
1948	0	0	0	0	0	0	0	127	0	0	0	0	127
1950	0	0	0	0	0	0	0	79	0	0	0	0	79
1959	0	0	0	0	0	0	0	64	0	0	0	0	64
1962	0	0	0	0	0	0	0	79	0	0	0	0	79
1966	0	0	0	0	0	0	0	127	0	0	0	0	127
1968	0	0	0	0	0	0	0	64	0	0	0	0	64
1972	0	0	0	0	0	0	0	64	0	0	0	0	64
1979	0	0	0	0	0	0	0	89	0	0	0	0	89
<b>Average</b>	0	0	0	0	0	0	0	98	0	0	0	0	98

## Preliminary ERPP Modeling Results and SWP/CVP System Evaluation

**Sacramento River Basin Monthly ERPP Water Acquisitions - Above Normal Years**  
(Thousand Acre-Feet)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
1922	0	0	0	0	0	234	0	0	0	0	0	0	234
1928	0	0	0	0	0	0	0	0	0	0	0	0	0
1940	0	0	0	0	0	0	0	0	0	0	0	0	0
1951	0	0	0	0	0	246	0	0	0	0	0	0	246
1954	0	0	0	0	0	9	0	0	0	0	0	0	9
1957	0	0	0	0	0	48	0	0	0	0	0	0	48
1973	0	0	0	0	0	79	0	0	0	0	0	0	79
1978	0	0	0	0	0	164	0	0	0	0	0	0	164
1980	0	0	0	0	0	107	0	0	0	0	0	0	107
1993	0	0	0	0	0	114	0	0	0	0	0	0	114
<b>Average</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>100</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>100</b>

**San Joaquin River Basin Monthly ERPP Water Acquisitions - Above Normal Years**  
(Thousand Acre-Feet)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
1922	0	0	0	0	0	0	0	184	0	0	0	0	184
1928	0	0	0	0	0	0	0	127	0	0	0	0	127
1940	0	0	0	0	0	0	0	89	0	0	0	0	89
1951	0	0	0	0	0	0	0	121	0	0	0	0	121
1954	0	0	0	0	0	0	0	142	0	0	0	0	142
1957	0	0	0	0	0	0	0	137	0	0	0	0	137
1973	0	0	0	0	0	0	0	89	0	0	0	0	89
1978	0	0	0	0	0	0	0	184	0	0	0	0	184
1980	0	0	0	0	0	0	0	184	0	0	0	0	184
1993	0	0	0	0	0	0	0	152	0	0	0	0	152
<b>Average</b>	<b>0</b>	<b>141</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>141</b>						

## Preliminary ERPP Modeling Results and SWP/CVP System Evaluation

**Sacramento River Basin Monthly ERPP Water Acquisitions - Wet Years**  
(Thousand Acre-Feet)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
1927	0	0	0	0	0	40	0	0	0	0	0	0	40
1938	0	0	0	0	0	0	0	0	0	0	0	0	0
1941	0	0	0	0	0	43	0	0	0	0	0	0	43
1942	0	0	0	0	0	64	0	0	0	0	0	0	64
1943	0	0	0	0	0	0	0	0	0	0	0	0	0
1952	0	0	0	0	0	18	0	0	0	0	0	0	18
1953	0	0	0	0	0	89	0	0	0	0	0	0	89
1956	0	0	0	0	0	79	0	0	0	0	0	0	79
1958	0	0	0	0	0	5	0	0	0	0	0	0	5
1963	0	0	0	0	0	79	0	0	0	0	0	0	79
1965	0	0	0	0	0	89	0	0	0	0	0	0	89
1967	0	0	0	0	0	15	0	0	0	0	0	0	15
1969	0	0	0	0	0	50	0	0	0	0	0	0	50
1970	0	0	0	0	0	89	0	183	0	0	0	0	272
1971	0	0	0	0	0	60	0	0	0	0	0	0	60
1974	0	0	0	0	0	0	0	0	0	0	0	0	0
1975	0	0	0	0	0	47	0	0	0	0	0	0	47
1982	0	0	0	0	0	0	0	0	0	0	0	0	0
1983	0	0	0	0	0	0	0	0	0	0	0	0	0
1984	0	0	0	0	0	89	0	172	0	0	0	0	261
1986	0	0	0	0	0	0	0	0	0	0	0	0	0
Average	0	0	0	0	0	41	0	17	0	0	0	0	58

**San Joaquin River Basin Monthly ERPP Water Acquisitions - Wet Years**  
(Thousand Acre-Feet)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
1927	0	0	0	0	0	0	0	105	0	0	0	0	105
1938	0	0	0	0	0	0	0	40	0	0	0	0	40
1941	0	0	0	0	0	0	0	88	0	0	0	0	88
1942	0	0	0	0	0	0	0	136	0	0	0	0	136
1943	0	0	0	0	0	0	0	168	0	0	0	0	168
1952	0	0	0	0	0	0	0	40	0	0	0	0	40
1953	0	0	0	0	0	0	0	138	0	0	0	0	138
1956	0	0	0	0	0	0	0	152	0	0	0	0	152
1958	0	0	0	0	0	0	0	56	0	0	0	0	56
1963	0	0	0	0	0	0	0	105	0	0	0	0	105
1965	0	0	0	0	0	0	0	184	0	0	0	0	184
1967	0	0	0	0	0	0	0	120	0	0	0	0	120
1969	0	0	0	0	0	0	0	40	0	0	0	0	40
1970	0	0	0	0	0	0	0	121	0	0	0	0	121
1971	0	0	0	0	0	0	0	139	0	0	0	0	139
1974	0	0	0	0	0	0	0	150	0	0	0	0	150
1975	0	0	0	0	0	0	0	184	0	0	0	0	184
1982	0	0	0	0	0	0	0	56	0	0	0	0	56
1983	0	0	0	0	0	0	0	104	0	0	0	0	104
1984	0	0	0	0	0	0	0	121	0	0	0	0	121
1986	0	0	0	0	0	0	0	152	0	0	0	0	152
Average	0	0	0	0	0	0	0	114	0	0	0	0	114

## Preliminary ERPP Modeling Results and SWP/CVP System Evaluation

**Sacramento River Monthly ERPP Water Acquisitions - Critical Years**  
(Thousand Acre-Feet)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
1924	0	0	0	0	0	0	0	0	0	0	0	0	0
1929	0	0	0	0	0	0	0	0	0	0	0	0	0
1931	0	0	0	0	0	0	0	0	0	0	0	0	0
1933	0	0	0	0	0	0	0	0	0	0	0	0	0
1934	0	0	0	0	0	0	0	0	0	0	0	0	0
1976	0	0	0	0	0	0	0	0	0	0	0	0	0
1977	0	0	0	0	0	0	0	0	0	0	0	0	0
1988	0	0	0	0	0	0	0	0	0	0	0	0	0
1990	0	0	0	0	0	0	0	0	0	0	0	0	0
1991	0	0	0	0	0	0	0	0	0	0	0	0	0
1992	0	0	0	0	0	0	0	0	0	0	0	0	0
1994	0	0	0	0	0	0	0	0	0	0	0	0	0
Average	0	0	0	0	0	0	0	0	0	0	0	0	0

**Feather River Monthly ERPP Water Acquisitions - Critical Years**  
(Thousand Acre-Feet)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
1924	0	0	0	0	0	0	0	0	0	0	0	0	0
1929	0	0	0	0	0	0	0	0	0	0	0	0	0
1931	0	0	0	0	0	0	0	0	0	0	0	0	0
1933	0	0	0	0	0	0	0	0	0	0	0	0	0
1934	0	0	0	0	0	0	0	0	0	0	0	0	0
1976	0	0	0	0	0	0	0	0	0	0	0	0	0
1977	0	0	0	0	0	0	0	0	0	0	0	0	0
1988	0	0	0	0	0	0	0	0	0	0	0	0	0
1990	0	0	0	0	0	0	0	0	0	0	0	0	0
1991	0	0	0	0	0	0	0	0	0	0	0	0	0
1992	0	0	0	0	0	0	0	0	0	0	0	0	0
1994	0	0	0	0	0	0	0	0	0	0	0	0	0
Average	0	0	0	0	0	0	0	0	0	0	0	0	0

## Preliminary ERPP Modeling Results and SWP/CVP System Evaluation

**Sacramento River Monthly ERPP Water Acquisitions - Dry Years**  
(Thousand Acre-Feet)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
1925	0	0	0	0	0	0	0	0	0	0	0	0	0
1926	0	0	0	0	0	6	0	0	0	0	0	0	6
1930	0	0	0	0	0	0	0	0	0	0	0	0	0
1932	0	0	0	0	0	35	0	0	0	0	0	0	35
1939	0	0	0	0	0	17	0	0	0	0	0	0	17
1944	0	0	0	0	0	0	0	0	0	0	0	0	0
1947	0	0	0	0	0	0	0	0	0	0	0	0	0
1949	0	0	0	0	0	0	0	0	0	0	0	0	0
1955	0	0	0	0	0	0	0	0	0	0	0	0	0
1960	0	0	0	0	0	0	0	0	0	0	0	0	0
1961	0	0	0	0	0	0	0	0	0	0	0	0	0
1964	0	0	0	0	0	0	0	0	0	0	0	0	0
1981	0	0	0	0	0	0	0	0	0	0	0	0	0
1985	0	0	0	0	0	0	0	0	0	0	0	0	0
1987	0	0	0	0	0	0	0	0	0	0	0	0	0
1989	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Average</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>

**Feather River Monthly ERPP Water Acquisitions - Dry Years**  
(Thousand Acre-Feet)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
1925	0	0	0	0	0	3	0	0	0	0	0	0	3
1926	0	0	0	0	0	84	0	0	0	0	0	0	84
1930	0	0	0	0	0	84	0	0	0	0	0	0	84
1932	0	0	0	0	0	55	0	0	0	0	0	0	55
1939	0	0	0	0	0	2	0	0	0	0	0	0	2
1944	0	0	0	0	0	65	0	0	0	0	0	0	65
1947	0	0	0	0	0	65	0	0	0	0	0	0	65
1949	0	0	0	0	0	65	0	0	0	0	0	0	65
1955	0	0	0	0	0	65	0	0	0	0	0	0	65
1960	0	0	0	0	0	79	0	0	0	0	0	0	79
1961	0	0	0	0	0	79	0	0	0	0	0	0	79
1964	0	0	0	0	0	65	0	0	0	0	0	0	65
1981	0	0	0	0	0	10	0	0	0	0	0	0	10
1985	0	0	0	0	0	65	0	0	0	0	0	0	65
1987	0	0	0	0	0	65	0	0	0	0	0	0	65
1989	0	0	0	0	0	84	0	0	0	0	0	0	84
<b>Average</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>58</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>58</b>

## Preliminary ERPP Modeling Results and SWP/CVP System Evaluation

**Sacramento River Monthly ERPP Water Acquisitions - Below Normal Years**  
(Thousand Acre-Feet)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
1923	0	0	0	0	0	191	0	0	0	0	0	0	191
1935	0	0	0	0	0	125	0	0	0	0	0	0	125
1936	0	0	0	0	0	185	0	0	0	0	0	0	185
1937	0	0	0	0	0	0	0	0	0	0	0	0	0
1945	0	0	0	0	0	130	0	0	0	0	0	0	130
1946	0	0	0	0	0	143	0	0	0	0	0	0	143
1948	0	0	0	0	0	162	0	0	0	0	0	0	162
1950	0	0	0	0	0	145	0	0	0	0	0	0	145
1959	0	0	0	0	0	89	0	0	0	0	0	0	89
1962	0	0	0	0	0	15	0	0	0	0	0	0	15
1966	0	0	0	0	0	0	0	0	0	0	0	0	0
1968	0	0	0	0	0	19	0	0	0	0	0	0	19
1972	0	0	0	0	0	0	0	0	0	0	0	0	0
1979	0	0	0	0	0	48	0	0	0	0	0	0	48
<b>Average</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>89</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>89</b>

**Feather River Monthly ERPP Water Acquisitions - Below Normal Years**  
(Thousand Acre-Feet)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
1923	0	0	0	0	0	105	0	0	0	0	0	0	105
1935	0	0	0	0	0	124	0	0	0	0	0	0	124
1936	0	0	0	0	0	105	0	0	0	0	0	0	105
1937	0	0	0	0	0	105	0	0	0	0	0	0	105
1945	0	0	0	0	0	105	0	0	0	0	0	0	105
1946	0	0	0	0	0	105	0	0	0	0	0	0	105
1948	0	0	0	0	0	119	0	0	0	0	0	0	119
1950	0	0	0	0	0	124	0	0	0	0	0	0	124
1959	0	0	0	0	0	20	0	0	0	0	0	0	20
1962	0	0	0	0	0	119	0	0	0	0	0	0	119
1966	0	0	0	0	0	68	0	0	0	0	0	0	68
1968	0	0	0	0	0	8	0	0	0	0	0	0	8
1972	0	0	0	0	0	4	0	0	0	0	0	0	4
1979	0	0	0	0	0	52	0	0	0	0	0	0	52
<b>Average</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>83</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>83</b>

# Preliminary ERPP Modeling Results and SWP/CVP System Evaluation

**Sacramento River Monthly ERPP Water Acquisitions - Above Normal Years**  
(Thousand Acre-Feet)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
1922	0	0	0	0	0	118	0	0	0	0	0	0	118
1928	0	0	0	0	0	0	0	0	0	0	0	0	0
1940	0	0	0	0	0	0	0	0	0	0	0	0	0
1951	0	0	0	0	0	128	0	0	0	0	0	0	128
1954	0	0	0	0	0	0	0	0	0	0	0	0	0
1957	0	0	0	0	0	0	0	0	0	0	0	0	0
1973	0	0	0	0	0	0	0	0	0	0	0	0	0
1978	0	0	0	0	0	0	0	0	0	0	0	0	0
1980	0	0	0	0	0	0	0	0	0	0	0	0	0
1993	0	0	0	0	0	0	0	0	0	0	0	0	0
Average	0	0	0	0	0	25	0	0	0	0	0	0	25

**Feather River Monthly ERPP Water Acquisitions - Above Normal Years**  
(Thousand Acre-Feet)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
1922	0	0	0	0	0	85	0	0	0	0	0	0	85
1928	0	0	0	0	0	0	0	0	0	0	0	0	0
1940	0	0	0	0	0	0	0	0	0	0	0	0	0
1951	0	0	0	0	0	89	0	0	0	0	0	0	89
1954	0	0	0	0	0	0	0	0	0	0	0	0	0
1957	0	0	0	0	0	42	0	0	0	0	0	0	42
1973	0	0	0	0	0	58	0	0	0	0	0	0	58
1978	0	0	0	0	0	164	0	0	0	0	0	0	164
1980	0	0	0	0	0	74	0	0	0	0	0	0	74
1993	0	0	0	0	0	45	0	0	0	0	0	0	45
Average	0	0	0	0	0	56	0	0	0	0	0	0	56

## Preliminary ERPP Modeling Results and SWP/CVP System Evaluation

**Sacramento River Monthly ERPP Water Acquisitions - Wet Years**  
(Thousand Acre-Feet)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
1927	0	0	0	0	0	0	0	0	0	0	0	0	0
1938	0	0	0	0	0	0	0	0	0	0	0	0	0
1941	0	0	0	0	0	0	0	0	0	0	0	0	0
1942	0	0	0	0	0	0	0	0	0	0	0	0	0
1943	0	0	0	0	0	0	0	0	0	0	0	0	0
1952	0	0	0	0	0	0	0	0	0	0	0	0	0
1953	0	0	0	0	0	0	0	0	0	0	0	0	0
1956	0	0	0	0	0	0	0	0	0	0	0	0	0
1958	0	0	0	0	0	0	0	0	0	0	0	0	0
1963	0	0	0	0	0	0	0	0	0	0	0	0	0
1965	0	0	0	0	0	0	0	0	0	0	0	0	0
1967	0	0	0	0	0	0	0	0	0	0	0	0	0
1969	0	0	0	0	0	0	0	0	0	0	0	0	0
1970	0	0	0	0	0	0	0	0	0	0	0	0	0
1971	0	0	0	0	0	0	0	0	0	0	0	0	0
1974	0	0	0	0	0	0	0	0	0	0	0	0	0
1975	0	0	0	0	0	0	0	0	0	0	0	0	0
1982	0	0	0	0	0	0	0	0	0	0	0	0	0
1983	0	0	0	0	0	0	0	0	0	0	0	0	0
1984	0	0	0	0	0	0	0	0	0	0	0	0	0
1986	0	0	0	0	0	0	0	0	0	0	0	0	0
Average	0	0	0	0	0	0	0	0	0	0	0	0	0

**Feather River Monthly ERPP Water Acquisitions - Wet Years**  
(Thousand Acre-Feet)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
1927	0	0	0	0	0	0	0	0	0	0	0	0	0
1938	0	0	0	0	0	0	0	0	0	0	0	0	0
1941	0	0	0	0	0	0	0	0	0	0	0	0	0
1942	0	0	0	0	0	0	0	0	0	0	0	0	0
1943	0	0	0	0	0	0	0	0	0	0	0	0	0
1952	0	0	0	0	0	0	0	0	0	0	0	0	0
1953	0	0	0	0	0	0	0	0	0	0	0	0	0
1956	0	0	0	0	0	0	0	0	0	0	0	0	0
1958	0	0	0	0	0	0	0	0	0	0	0	0	0
1963	0	0	0	0	0	0	0	0	0	0	0	0	0
1965	0	0	0	0	0	0	0	0	0	0	0	0	0
1967	0	0	0	0	0	0	0	0	0	0	0	0	0
1969	0	0	0	0	0	0	0	0	0	0	0	0	0
1970	0	0	0	0	0	0	0	0	0	0	0	0	0
1971	0	0	0	0	0	0	0	0	0	0	0	0	0
1974	0	0	0	0	0	0	0	0	0	0	0	0	0
1975	0	0	0	0	0	0	0	0	0	0	0	0	0
1982	0	0	0	0	0	0	0	0	0	0	0	0	0
1983	0	0	0	0	0	0	0	0	0	0	0	0	0
1984	0	0	0	0	0	0	0	0	0	0	0	0	0
1986	0	0	0	0	0	0	0	0	0	0	0	0	0
Average	0	0	0	0	0	0	0	0	0	0	0	0	0

## Preliminary ERPP Modeling Results and SWP/CVP System Evaluation

**Yuba River Monthly ERPP Water Acquisitions - Critical Years**  
(Thousand Acre-Feet)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
1924	0	0	0	0	0	0	0	0	0	0	0	0	0
1929	0	0	0	0	0	0	0	0	0	0	0	0	0
1931	0	0	0	0	0	0	0	0	0	0	0	0	0
1933	0	0	0	0	0	0	0	0	0	0	0	0	0
1934	0	0	0	0	0	0	0	0	0	0	0	0	0
1976	0	0	0	0	0	0	0	0	0	0	0	0	0
1977	0	0	0	0	0	0	0	0	0	0	0	0	0
1988	0	0	0	0	0	0	0	0	0	0	0	0	0
1990	0	0	0	0	0	0	0	0	0	0	0	0	0
1991	0	0	0	0	0	0	0	0	0	0	0	0	0
1992	0	0	0	0	0	0	0	0	0	0	0	0	0
1994	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Average</b>	<b>0</b>												

**American River Monthly ERPP Water Acquisitions - Critical Years**  
(Thousand Acre-Feet)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
1924	0	0	0	0	0	0	0	0	0	0	0	0	0
1929	0	0	0	0	0	0	0	0	0	0	0	0	0
1931	0	0	0	0	0	0	0	0	0	0	0	0	0
1933	0	0	0	0	0	0	0	0	0	0	0	0	0
1934	0	0	0	0	0	0	0	0	0	0	0	0	0
1976	0	0	0	0	0	0	0	0	0	0	0	0	0
1977	0	0	0	0	0	0	0	0	0	0	0	0	0
1988	0	0	0	0	0	0	0	0	0	0	0	0	0
1990	0	0	0	0	0	0	0	0	0	0	0	0	0
1991	0	0	0	0	0	0	0	0	0	0	0	0	0
1992	0	0	0	0	0	0	0	0	0	0	0	0	0
1994	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Average</b>	<b>0</b>												

## Preliminary ERPP Modeling Results and SWP/CVP System Evaluation

**Yuba River Monthly ERPP Water Acquisitions - Dry Years**  
(Thousand Acre-Feet)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
1925	0	0	0	0	0	0	0	0	0	0	0	0	0
1926	0	0	0	0	0	0	0	0	0	0	0	0	0
1930	0	0	0	0	0	0	0	0	0	0	0	0	0
1932	0	0	0	0	0	50	0	0	0	0	0	0	50
1939	0	0	0	0	0	15	0	0	0	0	0	0	15
1944	0	0	0	0	0	0	0	0	0	0	0	0	0
1947	0	0	0	0	0	0	0	0	0	0	0	0	0
1949	0	0	0	0	0	0	0	0	0	0	0	0	0
1955	0	0	0	0	0	10	0	0	0	0	0	0	10
1960	0	0	0	0	0	0	0	0	0	0	0	0	0
1961	0	0	0	0	0	20	0	0	0	0	0	0	20
1964	0	0	0	0	0	12	0	0	0	0	0	0	12
1981	0	0	0	0	0	0	0	0	0	0	0	0	0
1985	0	0	0	0	0	0	0	0	0	0	0	0	0
1987	0	0	0	0	0	0	0	0	0	0	0	0	0
1989	0	0	0	0	0	0	0	0	0	0	0	0	0
Average	0	0	0	0	0	7	0	0	0	0	0	0	7

**American River Monthly ERPP Water Acquisitions - Dry Years**  
(Thousand Acre-Feet)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
1925	0	0	0	0	0	0	0	0	0	0	0	0	0
1926	0	0	0	0	0	38	0	0	0	0	0	0	38
1930	0	0	0	0	0	17	0	0	0	0	0	0	17
1932	0	0	0	0	0	0	0	0	0	0	0	0	0
1939	0	0	0	0	0	30	0	0	0	0	0	0	30
1944	0	0	0	0	0	30	0	0	0	0	0	0	30
1947	0	0	0	0	0	38	0	0	0	0	0	0	38
1949	0	0	0	0	0	20	0	0	0	0	0	0	20
1955	0	0	0	0	0	38	0	0	0	0	0	0	38
1960	0	0	0	0	0	0	0	0	0	0	0	0	0
1961	0	0	0	0	0	46	0	0	0	0	0	0	46
1964	0	0	0	0	0	30	0	0	0	0	0	0	30
1981	0	0	0	0	0	30	0	0	0	0	0	0	30
1985	0	0	0	0	0	30	0	0	0	0	0	0	30
1987	0	0	0	0	0	30	0	0	0	0	0	0	30
1989	0	0	0	0	0	0	0	0	0	0	0	0	0
Average	0	0	0	0	0	24	0	0	0	0	0	0	24

## Preliminary ERPP Modeling Results and SWP/CVP System Evaluation

**Yuba River Monthly ERPP Water Acquisitions - Below Normal Years**  
(Thousand Acre-Feet)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
1923	0	0	0	0	0	7	0	0	0	0	0	0	7
1935	0	0	0	0	0	0	0	0	0	0	0	0	0
1936	0	0	0	0	0	0	0	0	0	0	0	0	0
1937	0	0	0	0	0	0	0	0	0	0	0	0	0
1945	0	0	0	0	0	0	0	0	0	0	0	0	0
1946	0	0	0	0	0	0	0	0	0	0	0	0	0
1948	0	0	0	0	0	21	0	0	0	0	0	0	21
1950	0	0	0	0	0	0	0	0	0	0	0	0	0
1959	0	0	0	0	0	0	0	0	0	0	0	0	0
1962	0	0	0	0	0	0	0	0	0	0	0	0	0
1966	0	0	0	0	0	1	0	0	0	0	0	0	1
1968	0	0	0	0	0	0	0	0	0	0	0	0	0
1972	0	0	0	0	0	0	0	0	0	0	0	0	0
1979	0	0	0	0	0	0	0	0	0	0	0	0	0
Average	0	0	0	0	0	2	0	0	0	0	0	0	2

**American River Monthly ERPP Water Acquisitions - Below Normal Years**  
(Thousand Acre-Feet)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
1923	0	0	0	0	0	40	0	0	0	0	0	0	40
1935	0	0	0	0	0	40	0	0	0	0	0	0	40
1936	0	0	0	0	0	13	0	0	0	0	0	0	13
1937	0	0	0	0	0	50	0	0	0	0	0	0	50
1945	0	0	0	0	0	50	0	0	0	0	0	0	50
1946	0	0	0	0	0	39	0	0	0	0	0	0	39
1948	0	0	0	0	0	50	0	0	0	0	0	0	50
1950	0	0	0	0	0	34	0	0	0	0	0	0	34
1959	0	0	0	0	0	54	0	0	0	0	0	0	54
1962	0	0	0	0	0	46	0	0	0	0	0	0	46
1966	0	0	0	0	0	60	0	0	0	0	0	0	60
1968	0	0	0	0	0	49	0	0	0	0	0	0	49
1972	0	0	0	0	0	14	0	0	0	0	0	0	14
1979	0	0	0	0	0	31	0	0	0	0	0	0	31
Average	0	0	0	0	0	41	0	0	0	0	0	0	41

## Preliminary ERPP Modeling Results and SWP/CVP System Evaluation

**Yuba River Monthly ERPP Water Acquisitions - Above Normal Years**  
(Thousand Acre-Feet)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
1922	0	0	0	0	0	0	0	0	0	0	0	0	0
1928	0	0	0	0	0	0	0	0	0	0	0	0	0
1940	0	0	0	0	0	0	0	0	0	0	0	0	0
1951	0	0	0	0	0	0	0	0	0	0	0	0	0
1954	0	0	0	0	0	0	0	0	0	0	0	0	0
1957	0	0	0	0	0	0	0	0	0	0	0	0	0
1973	0	0	0	0	0	0	0	0	0	0	0	0	0
1978	0	0	0	0	0	0	0	0	0	0	0	0	0
1980	0	0	0	0	0	0	0	0	0	0	0	0	0
1993	0	0	0	0	0	69	0	0	0	0	0	0	69
<b>Average</b>	0	0	0	0	0	7	0	0	0	0	0	0	7

**American River Monthly ERPP Water Acquisitions - Above Normal Years**  
(Thousand Acre-Feet)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
1922	0	0	0	0	0	10	0	0	0	0	0	0	10
1928	0	0	0	0	0	0	0	0	0	0	0	0	0
1940	0	0	0	0	0	0	0	0	0	0	0	0	0
1951	0	0	0	0	0	29	0	0	0	0	0	0	29
1954	0	0	0	0	0	9	0	0	0	0	0	0	9
1957	0	0	0	0	0	6	0	0	0	0	0	0	6
1973	0	0	0	0	0	21	0	0	0	0	0	0	21
1978	0	0	0	0	0	0	0	0	0	0	0	0	0
1980	0	0	0	0	0	33	0	0	0	0	0	0	33
1993	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Average</b>	0	0	0	0	0	11	0	0	0	0	0	0	11

## Preliminary ERPP Modeling Results and SWP/CVP System Evaluation

**Yuba River Monthly ERPP Water Acquisitions - Wet Years**  
(Thousand Acre-Feet)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
1927	0	0	0	0	0	0	0	0	0	0	0	0	0
1938	0	0	0	0	0	0	0	0	0	0	0	0	0
1941	0	0	0	0	0	0	0	0	0	0	0	0	0
1942	0	0	0	0	0	0	0	0	0	0	0	0	0
1943	0	0	0	0	0	0	0	0	0	0	0	0	0
1952	0	0	0	0	0	0	0	0	0	0	0	0	0
1953	0	0	0	0	0	0	0	0	0	0	0	0	0
1956	0	0	0	0	0	0	0	0	0	0	0	0	0
1958	0	0	0	0	0	0	0	0	0	0	0	0	0
1963	0	0	0	0	0	0	0	0	0	0	0	0	0
1965	0	0	0	0	0	0	0	0	0	0	0	0	0
1967	0	0	0	0	0	0	0	0	0	0	0	0	0
1969	0	0	0	0	0	0	0	0	0	0	0	0	0
1970	0	0	0	0	0	0	0	0	0	0	0	0	0
1971	0	0	0	0	0	0	0	0	0	0	0	0	0
1974	0	0	0	0	0	0	0	0	0	0	0	0	0
1975	0	0	0	0	0	0	0	0	0	0	0	0	0
1982	0	0	0	0	0	0	0	0	0	0	0	0	0
1983	0	0	0	0	0	0	0	0	0	0	0	0	0
1984	0	0	0	0	0	0	0	0	0	0	0	0	0
1986	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Average</b>	<b>0</b>												

**American River Monthly ERPP Water Acquisitions - Wet Years**  
(Thousand Acre-Feet)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
1927	0	0	0	0	0	40	0	0	0	0	0	0	40
1938	0	0	0	0	0	0	0	0	0	0	0	0	0
1941	0	0	0	0	0	43	0	0	0	0	0	0	43
1942	0	0	0	0	0	64	0	0	0	0	0	0	64
1943	0	0	0	0	0	0	0	0	0	0	0	0	0
1952	0	0	0	0	0	18	0	0	0	0	0	0	18
1953	0	0	0	0	0	89	0	0	0	0	0	0	89
1956	0	0	0	0	0	79	0	0	0	0	0	0	79
1958	0	0	0	0	0	5	0	0	0	0	0	0	5
1963	0	0	0	0	0	79	0	0	0	0	0	0	79
1965	0	0	0	0	0	89	0	0	0	0	0	0	89
1967	0	0	0	0	0	15	0	0	0	0	0	0	15
1969	0	0	0	0	0	50	0	0	0	0	0	0	50
1970	0	0	0	0	0	89	0	0	0	0	0	0	89
1971	0	0	0	0	0	60	0	0	0	0	0	0	60
1974	0	0	0	0	0	0	0	0	0	0	0	0	0
1975	0	0	0	0	0	47	0	0	0	0	0	0	47
1982	0	0	0	0	0	0	0	0	0	0	0	0	0
1983	0	0	0	0	0	0	0	0	0	0	0	0	0
1984	0	0	0	0	0	89	0	0	0	0	0	0	89
1986	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Average</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>41</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>41</b>

## Preliminary ERPP Modeling Results and SWP/CVP System Evaluation

**Lower Sacramento River below Freeport Monthly ERPP Water Acquisitions - Critical Years**  
(Thousand Acre-Feet)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
1924	0	0	0	0	0	0	0	0	0	0	0	0	0
1929	0	0	0	0	0	0	0	0	0	0	0	0	0
1931	0	0	0	0	0	0	0	0	0	0	0	0	0
1933	0	0	0	0	0	0	0	0	0	0	0	0	0
1934	0	0	0	0	0	0	0	0	0	0	0	0	0
1976	0	0	0	0	0	0	0	0	0	0	0	0	0
1977	0	0	0	0	0	0	0	0	0	0	0	0	0
1988	0	0	0	0	0	0	0	0	0	0	0	0	0
1990	0	0	0	0	0	0	0	0	0	0	0	0	0
1991	0	0	0	0	0	0	0	0	0	0	0	0	0
1992	0	0	0	0	0	0	0	0	0	0	0	0	0
1994	0	0	0	0	0	0	0	0	0	0	0	0	0
Average	0	0	0	0	0	0	0	0	0	0	0	0	0

**Lower Sacramento River above Hood Monthly ERPP Water Acquisitions - Critical Years**  
(Thousand Acre-Feet)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
1924	0	0	0	0	0	0	0	0	0	0	0	0	0
1929	0	0	0	0	0	0	0	0	0	0	0	0	0
1931	0	0	0	0	0	0	0	0	0	0	0	0	0
1933	0	0	0	0	0	0	0	9	0	0	0	0	9
1934	0	0	0	0	0	0	0	0	0	0	0	0	0
1976	0	0	0	0	0	0	0	0	0	0	0	0	0
1977	0	0	0	0	0	0	0	0	0	0	0	0	0
1988	0	0	0	0	0	0	0	0	0	0	0	0	0
1990	0	0	0	0	0	0	0	0	0	0	0	0	0
1991	0	0	0	0	0	0	0	0	0	0	0	0	0
1992	0	0	0	0	0	0	0	0	0	0	0	0	0
1994	0	0	0	0	0	0	0	0	0	0	0	0	0
Average	0	0	0	0	0	0	0	1	0	0	0	0	1

# Premininary ERPP Modeling Results and SWP/CVP System Evaluation

**Lower Sacramento River below Freeport Monthly ERPP Water Acquisitions - Dry Years**  
(Thousand Acre-Feet)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
1925	0	0	0	0	0	0	0	50	0	0	0	0	50
1926	0	0	0	0	0	0	0	0	0	0	0	0	0
1930	0	0	0	0	0	0	0	0	0	0	0	0	0
1932	0	0	0	0	0	0	0	64	0	0	0	0	64
1939	0	0	0	0	0	0	0	110	0	0	0	0	110
1944	0	0	0	0	0	0	0	184	0	0	0	0	184
1947	0	0	0	0	0	0	0	115	0	0	0	0	115
1949	0	0	0	0	0	0	0	78	0	0	0	0	78
1955	0	0	0	0	0	0	0	101	0	0	0	0	101
1960	0	0	0	0	0	0	0	0	0	0	0	0	0
1961	0	0	0	0	0	0	0	246	0	0	0	0	246
1964	0	0	0	0	0	0	0	107	0	0	0	0	107
1981	0	0	0	0	0	0	0	84	0	0	0	0	84
1985	0	0	0	0	0	0	0	0	0	0	0	0	0
1987	0	0	0	0	0	0	0	229	0	0	0	0	229
1989	0	0	0	0	0	0	0	0	0	0	0	0	0
Average	0	0	0	0	0	0	0	86	0	0	0	0	86

**Lower Sacramento River above Hood Monthly ERPP Water Acquisitions - Dry Years**  
(Thousand Acre-Feet)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
1925	0	0	0	0	0	0	0	0	0	0	0	0	0
1926	0	0	0	0	0	56	0	0	0	0	0	0	56
1930	0	0	0	0	0	0	0	0	0	0	0	0	0
1932	0	0	0	0	0	33	0	87	0	0	0	0	120
1939	0	0	0	0	0	83	0	0	0	0	0	0	83
1944	0	0	0	0	0	0	0	0	0	0	0	0	0
1947	0	0	0	0	0	0	0	0	0	0	0	0	0
1949	0	0	0	0	0	0	0	0	0	0	0	0	0
1955	0	0	0	0	0	82	0	0	0	0	0	0	82
1960	0	0	0	0	0	0	0	0	0	0	0	0	0
1961	0	0	0	0	0	0	0	0	0	0	0	0	0
1964	0	0	0	0	0	90	0	0	0	0	0	0	90
1981	0	0	0	0	0	0	0	0	0	0	0	0	0
1985	0	0	0	0	0	19	0	0	0	0	0	0	19
1987	0	0	0	0	0	0	0	0	0	0	0	0	0
1989	0	0	0	0	0	0	0	0	0	0	0	0	0
Average	0	0	0	0	0	23	0	5	0	0	0	0	28

## Preliminary ERPP Modeling Results and SWP/CVP System Evaluation

**Lower Sacramento River below Freeport Monthly ERPP Water Acquisitions - Below Normal Years**  
(Thousand Acre-Feet)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
1923	0	0	0	0	0	0	0	0	0	0	0	0	0
1935	0	0	0	0	0	0	0	0	0	0	0	0	0
1936	0	0	0	0	0	0	0	0	0	0	0	0	0
1937	0	0	0	0	0	0	0	0	0	0	0	0	0
1945	0	0	0	0	0	0	0	80	0	0	0	0	80
1946	0	0	0	0	0	0	0	35	0	0	0	0	35
1948	0	0	0	0	0	0	0	0	0	0	0	0	0
1950	0	0	0	0	0	0	0	0	0	0	0	0	0
1959	0	0	0	0	0	0	0	113	0	0	0	0	113
1962	0	0	0	0	0	0	0	1	0	0	0	0	1
1966	0	0	0	0	0	0	0	0	0	0	0	0	0
1968	0	0	0	0	0	0	0	188	0	0	0	0	188
1972	0	0	0	0	0	0	0	0	0	0	0	0	0
1979	0	0	0	0	0	0	0	43	0	0	0	0	43
Average	0	0	0	0	0	0	0	33	0	0	0	0	33

**Lower Sacramento River above Hood Monthly ERPP Water Acquisitions - Below Normal Years**  
(Thousand Acre-Feet)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
1923	0	0	0	0	0	12	0	0	0	0	0	0	12
1935	0	0	0	0	0	0	0	0	0	0	0	0	0
1936	0	0	0	0	0	0	0	0	0	0	0	0	0
1937	0	0	0	0	0	0	0	0	0	0	0	0	0
1945	0	0	0	0	0	0	0	56	0	0	0	0	56
1946	0	0	0	0	0	4	0	118	0	0	0	0	122
1948	0	0	0	0	0	0	0	0	0	0	0	0	0
1950	0	0	0	0	0	0	0	0	0	0	0	0	0
1959	0	0	0	0	0	15	0	0	0	0	0	0	15
1962	0	0	0	0	0	0	0	0	0	0	0	0	0
1966	0	0	0	0	0	48	0	0	0	0	0	0	48
1968	0	0	0	0	0	0	0	0	0	0	0	0	0
1972	0	0	0	0	0	67	0	0	0	0	0	0	67
1979	0	0	0	0	0	0	0	28	0	0	0	0	28
Average	0	0	0	0	0	10	0	14	0	0	0	0	25

## Preliminary ERPP Modeling Results and SWP/CVP System Evaluation

**Lower Sacramento River below Freeport Monthly ERPP Water Acquisitions - Above Normal Years**  
(Thousand Acre-Feet)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
1922	0	0	0	0	0	0	0	0	0	0	0	0	0
1928	0	0	0	0	0	0	0	0	0	0	0	0	0
1940	0	0	0	0	0	0	0	0	0	0	0	0	0
1951	0	0	0	0	0	0	0	0	0	0	0	0	0
1954	0	0	0	0	0	0	0	0	0	0	0	0	0
1957	0	0	0	0	0	0	0	0	0	0	0	0	0
1973	0	0	0	0	0	0	0	0	0	0	0	0	0
1978	0	0	0	0	0	0	0	0	0	0	0	0	0
1980	0	0	0	0	0	0	0	0	0	0	0	0	0
1993	0	0	0	0	0	0	0	0	0	0	0	0	0
Average	0	0	0	0	0	0	0	0	0	0	0	0	0

**Lower Sacramento River above Hood Monthly ERPP Water Acquisitions - Above Normal Years**  
(Thousand Acre-Feet)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
1922	0	0	0	0	0	21	0	0	0	0	0	0	21
1928	0	0	0	0	0	0	0	0	0	0	0	0	0
1940	0	0	0	0	0	0	0	0	0	0	0	0	0
1951	0	0	0	0	0	0	0	0	0	0	0	0	0
1954	0	0	0	0	0	0	0	0	0	0	0	0	0
1957	0	0	0	0	0	0	0	0	0	0	0	0	0
1973	0	0	0	0	0	0	0	0	0	0	0	0	0
1978	0	0	0	0	0	0	0	0	0	0	0	0	0
1980	0	0	0	0	0	0	0	0	0	0	0	0	0
1993	0	0	0	0	0	0	0	0	0	0	0	0	0
Average	0	0	0	0	0	2	0	0	0	0	0	0	2

## Preliminary ERPP Modeling Results and SWP/CVP System Evaluation

**Lower Sacramento River below Freeport Monthly ERPP Water Acquisitions - Wet Years**  
(Thousand Acre-Feet)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
1927	0	0	0	0	0	0	0	0	0	0	0	0	0
1938	0	0	0	0	0	0	0	0	0	0	0	0	0
1941	0	0	0	0	0	0	0	0	0	0	0	0	0
1942	0	0	0	0	0	0	0	0	0	0	0	0	0
1943	0	0	0	0	0	0	0	0	0	0	0	0	0
1952	0	0	0	0	0	0	0	0	0	0	0	0	0
1953	0	0	0	0	0	0	0	0	0	0	0	0	0
1956	0	0	0	0	0	0	0	0	0	0	0	0	0
1958	0	0	0	0	0	0	0	0	0	0	0	0	0
1963	0	0	0	0	0	0	0	0	0	0	0	0	0
1965	0	0	0	0	0	0	0	0	0	0	0	0	0
1967	0	0	0	0	0	0	0	0	0	0	0	0	0
1969	0	0	0	0	0	0	0	0	0	0	0	0	0
1970	0	0	0	0	0	0	0	40	0	0	0	0	40
1971	0	0	0	0	0	0	0	0	0	0	0	0	0
1974	0	0	0	0	0	0	0	0	0	0	0	0	0
1975	0	0	0	0	0	0	0	0	0	0	0	0	0
1982	0	0	0	0	0	0	0	0	0	0	0	0	0
1983	0	0	0	0	0	0	0	0	0	0	0	0	0
1984	0	0	0	0	0	0	0	28	0	0	0	0	28
1986	0	0	0	0	0	0	0	0	0	0	0	0	0
Average	0	0	0	0	0	0	0	3	0	0	0	0	3

**Lower Sacramento River above Hood Monthly ERPP Water Acquisitions - Wet Years**  
(Thousand Acre-Feet)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
1927	0	0	0	0	0	0	0	0	0	0	0	0	0
1938	0	0	0	0	0	0	0	0	0	0	0	0	0
1941	0	0	0	0	0	0	0	0	0	0	0	0	0
1942	0	0	0	0	0	0	0	0	0	0	0	0	0
1943	0	0	0	0	0	0	0	0	0	0	0	0	0
1952	0	0	0	0	0	0	0	0	0	0	0	0	0
1953	0	0	0	0	0	0	0	0	0	0	0	0	0
1956	0	0	0	0	0	0	0	0	0	0	0	0	0
1958	0	0	0	0	0	0	0	0	0	0	0	0	0
1963	0	0	0	0	0	0	0	0	0	0	0	0	0
1965	0	0	0	0	0	0	0	0	0	0	0	0	0
1967	0	0	0	0	0	0	0	0	0	0	0	0	0
1969	0	0	0	0	0	0	0	0	0	0	0	0	0
1970	0	0	0	0	0	0	0	143	0	0	0	0	143
1971	0	0	0	0	0	0	0	0	0	0	0	0	0
1974	0	0	0	0	0	0	0	0	0	0	0	0	0
1975	0	0	0	0	0	0	0	0	0	0	0	0	0
1982	0	0	0	0	0	0	0	0	0	0	0	0	0
1983	0	0	0	0	0	0	0	0	0	0	0	0	0
1984	0	0	0	0	0	0	0	144	0	0	0	0	144
1986	0	0	0	0	0	0	0	0	0	0	0	0	0
Average	0	0	0	0	0	0	0	14	0	0	0	0	14

## Preliminary ERPP Modeling Results and SWP/CVP System Evaluation

**Stanislaus River Monthly ERPP Water Acquisitions - Critical Years**  
(Thousand Acre-Feet)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
1924	0	0	0	0	0	0	0	0	0	0	0	0	0
1929	0	0	0	0	0	0	0	0	0	0	0	0	0
1931	0	0	0	0	0	0	0	0	0	0	0	0	0
1933	0	0	0	0	0	0	0	0	0	0	0	0	0
1934	0	0	0	0	0	0	0	0	0	0	0	0	0
1976	0	0	0	0	0	0	0	0	0	0	0	0	0
1977	0	0	0	0	0	0	0	0	0	0	0	0	0
1988	0	0	0	0	0	0	0	0	0	0	0	0	0
1990	0	0	0	0	0	0	0	0	0	0	0	0	0
1991	0	0	0	0	0	0	0	0	0	0	0	0	0
1992	0	0	0	0	0	0	0	0	0	0	0	0	0
1994	0	0	0	0	0	0	0	0	0	0	0	0	0
Average	0	0	0	0	0	0	0	0	0	0	0	0	0

**Tuolumne River Monthly ERPP Water Acquisitions - Critical Years**  
(Thousand Acre-Feet)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
1924	0	0	0	0	0	0	0	0	0	0	0	0	0
1929	0	0	0	0	0	0	0	0	0	0	0	0	0
1931	0	0	0	0	0	0	0	0	0	0	0	0	0
1933	0	0	0	0	0	0	0	32	0	0	0	0	32
1934	0	0	0	0	0	0	0	0	0	0	0	0	0
1976	0	0	0	0	0	0	0	0	0	0	0	0	0
1977	0	0	0	0	0	0	0	0	0	0	0	0	0
1988	0	0	0	0	0	0	0	0	0	0	0	0	0
1990	0	0	0	0	0	0	0	0	0	0	0	0	0
1991	0	0	0	0	0	0	0	0	0	0	0	0	0
1992	0	0	0	0	0	0	0	0	0	0	0	0	0
1994	0	0	0	0	0	0	0	0	0	0	0	0	0
Average	0	0	0	0	0	0	0	3	0	0	0	0	3

## Preliminary ERPP Modeling Results and SWP/CVP System Evaluation

**Stanislaus River Monthly ERPP Water Acquisitions - Dry Years**  
(Thousand Acre-Feet)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
1925	0	0	0	0	0	0	0	31	0	0	0	0	31
1926	0	0	0	0	0	0	0	0	0	0	0	0	0
1930	0	0	0	0	0	0	0	0	0	0	0	0	0
1932	0	0	0	0	0	0	0	25	0	0	0	0	25
1939	0	0	0	0	0	0	0	0	0	0	0	0	0
1944	0	0	0	0	0	0	0	31	0	0	0	0	31
1947	0	0	0	0	0	0	0	0	0	0	0	0	0
1949	0	0	0	0	0	0	0	31	0	0	0	0	31
1955	0	0	0	0	0	0	0	0	0	0	0	0	0
1960	0	0	0	0	0	0	0	0	0	0	0	0	0
1961	0	0	0	0	0	0	0	0	0	0	0	0	0
1964	0	0	0	0	0	0	0	0	0	0	0	0	0
1981	0	0	0	0	0	0	0	0	0	0	0	0	0
1985	0	0	0	0	0	0	0	0	0	0	0	0	0
1987	0	0	0	0	0	0	0	0	0	0	0	0	0
1989	0	0	0	0	0	0	0	0	0	0	0	0	0
Average	0	0	0	0	0	0	0	7	0	0	0	0	7

**Tuolumne River Monthly ERPP Water Acquisitions - Dry Years**  
(Thousand Acre-Feet)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
1925	0	0	0	0	0	0	0	64	0	0	0	0	64
1926	0	0	0	0	0	0	0	32	0	0	0	0	32
1930	0	0	0	0	0	0	0	0	0	0	0	0	0
1932	0	0	0	0	0	0	0	32	0	0	0	0	32
1939	0	0	0	0	0	0	0	48	0	0	0	0	48
1944	0	0	0	0	0	0	0	64	0	0	0	0	64
1947	0	0	0	0	0	0	0	48	0	0	0	0	48
1949	0	0	0	0	0	0	0	48	0	0	0	0	48
1955	0	0	0	0	0	0	0	48	0	0	0	0	48
1960	0	0	0	0	0	0	0	0	0	0	0	0	0
1961	0	0	0	0	0	0	0	0	0	0	0	0	0
1964	0	0	0	0	0	0	0	32	0	0	0	0	32
1981	0	0	0	0	0	0	0	48	0	0	0	0	48
1985	0	0	0	0	0	0	0	48	0	0	0	0	48
1987	0	0	0	0	0	0	0	0	0	0	0	0	0
1989	0	0	0	0	0	0	0	0	0	0	0	0	0
Average	0	0	0	0	0	0	0	32	0	0	0	0	32

## Preliminary ERPP Modeling Results and SWP/CVP System Evaluation

**Stanislaus River Monthly ERPP Water Acquisitions - Below Normal Years**  
(Thousand Acre-Feet)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
1923	0	0	0	0	0	0	0	25	0	0	0	0	25
1935	0	0	0	0	0	0	0	25	0	0	0	0	25
1936	0	0	0	0	0	0	0	25	0	0	0	0	25
1937	0	0	0	0	0	0	0	40	0	0	0	0	40
1945	0	0	0	0	0	0	0	25	0	0	0	0	25
1946	0	0	0	0	0	0	0	25	0	0	0	0	25
1948	0	0	0	0	0	0	0	31	0	0	0	0	31
1950	0	0	0	0	0	0	0	31	0	0	0	0	31
1959	0	0	0	0	0	0	0	0	0	0	0	0	0
1962	0	0	0	0	0	0	0	31	0	0	0	0	31
1966	0	0	0	0	0	0	0	31	0	0	0	0	31
1968	0	0	0	0	0	0	0	0	0	0	0	0	0
1972	0	0	0	0	0	0	0	0	0	0	0	0	0
1979	0	0	0	0	0	0	0	25	0	0	0	0	25
Average	0	0	0	0	0	0	0	22	0	0	0	0	22

**Tuolumne River Monthly ERPP Water Acquisitions - Below Normal Years**  
(Thousand Acre-Feet)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
1923	0	0	0	0	0	0	0	48	0	0	0	0	48
1935	0	0	0	0	0	0	0	48	0	0	0	0	48
1936	0	0	0	0	0	0	0	48	0	0	0	0	48
1937	0	0	0	0	0	0	0	80	0	0	0	0	80
1945	0	0	0	0	0	0	0	48	0	0	0	0	48
1946	0	0	0	0	0	0	0	48	0	0	0	0	48
1948	0	0	0	0	0	0	0	64	0	0	0	0	64
1950	0	0	0	0	0	0	0	32	0	0	0	0	32
1959	0	0	0	0	0	0	0	48	0	0	0	0	48
1962	0	0	0	0	0	0	0	32	0	0	0	0	32
1966	0	0	0	0	0	0	0	64	0	0	0	0	64
1968	0	0	0	0	0	0	0	48	0	0	0	0	48
1972	0	0	0	0	0	0	0	48	0	0	0	0	48
1979	0	0	0	0	0	0	0	32	0	0	0	0	32
Average	0	0	0	0	0	0	0	49	0	0	0	0	49

## Preliminary ERPP Modeling Results and SWP/CVP System Evaluation

**Stanislaus River Monthly ERPP Water Acquisitions - Above Normal Years**  
(Thousand Acre-Feet)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
1922	0	0	0	0	0	0	0	40	0	0	0	0	40
1928	0	0	0	0	0	0	0	31	0	0	0	0	31
1940	0	0	0	0	0	0	0	25	0	0	0	0	25
1951	0	0	0	0	0	0	0	25	0	0	0	0	25
1954	0	0	0	0	0	0	0	30	0	0	0	0	30
1957	0	0	0	0	0	0	0	25	0	0	0	0	25
1973	0	0	0	0	0	0	0	25	0	0	0	0	25
1978	0	0	0	0	0	0	0	40	0	0	0	0	40
1980	0	0	0	0	0	0	0	40	0	0	0	0	40
1993	0	0	0	0	0	0	0	40	0	0	0	0	40
<b>Average</b>	<b>0</b>	<b>32</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>32</b>						

**Tuolumne River Monthly ERPP Water Acquisitions - Above Normal Years**  
(Thousand Acre-Feet)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
1922	0	0	0	0	0	0	0	80	0	0	0	0	80
1928	0	0	0	0	0	0	0	64	0	0	0	0	64
1940	0	0	0	0	0	0	0	32	0	0	0	0	32
1951	0	0	0	0	0	0	0	48	0	0	0	0	48
1954	0	0	0	0	0	0	0	64	0	0	0	0	64
1957	0	0	0	0	0	0	0	64	0	0	0	0	64
1973	0	0	0	0	0	0	0	48	0	0	0	0	48
1978	0	0	0	0	0	0	0	80	0	0	0	0	80
1980	0	0	0	0	0	0	0	80	0	0	0	0	80
1993	0	0	0	0	0	0	0	80	0	0	0	0	80
<b>Average</b>	<b>0</b>	<b>64</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>64</b>						

## Preliminary ERPP Modeling Results and SWP/CVP System Evaluation

**Stanislaus River Monthly ERPP Water Acquisitions - Wet Years**  
(Thousand Acre-Feet)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
1927	0	0	0	0	0	0	0	25	0	0	0	0	25
1938	0	0	0	0	0	0	0	40	0	0	0	0	40
1941	0	0	0	0	0	0	0	40	0	0	0	0	40
1942	0	0	0	0	0	0	0	40	0	0	0	0	40
1943	0	0	0	0	0	0	0	40	0	0	0	0	40
1952	0	0	0	0	0	0	0	40	0	0	0	0	40
1953	0	0	0	0	0	0	0	26	0	0	0	0	26
1956	0	0	0	0	0	0	0	40	0	0	0	0	40
1958	0	0	0	0	0	0	0	40	0	0	0	0	40
1963	0	0	0	0	0	0	0	25	0	0	0	0	25
1965	0	0	0	0	0	0	0	40	0	0	0	0	40
1967	0	0	0	0	0	0	0	40	0	0	0	0	40
1969	0	0	0	0	0	0	0	40	0	0	0	0	40
1970	0	0	0	0	0	0	0	25	0	0	0	0	25
1971	0	0	0	0	0	0	0	27	0	0	0	0	27
1974	0	0	0	0	0	0	0	38	0	0	0	0	38
1975	0	0	0	0	0	0	0	40	0	0	0	0	40
1982	0	0	0	0	0	0	0	40	0	0	0	0	40
1983	0	0	0	0	0	0	0	40	0	0	0	0	40
1984	0	0	0	0	0	0	0	25	0	0	0	0	25
1986	0	0	0	0	0	0	0	40	0	0	0	0	40
Average	0	0	0	0	0	0	0	36	0	0	0	0	36

**Tuolumne River Monthly ERPP Water Acquisitions - Wet Years**  
(Thousand Acre-Feet)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
1927	0	0	0	0	0	0	0	48	0	0	0	0	48
1938	0	0	0	0	0	0	0	0	0	0	0	0	0
1941	0	0	0	0	0	0	0	16	0	0	0	0	16
1942	0	0	0	0	0	0	0	32	0	0	0	0	32
1943	0	0	0	0	0	0	0	80	0	0	0	0	80
1952	0	0	0	0	0	0	0	0	0	0	0	0	0
1953	0	0	0	0	0	0	0	64	0	0	0	0	64
1956	0	0	0	0	0	0	0	48	0	0	0	0	48
1958	0	0	0	0	0	0	0	0	0	0	0	0	0
1963	0	0	0	0	0	0	0	48	0	0	0	0	48
1965	0	0	0	0	0	0	0	80	0	0	0	0	80
1967	0	0	0	0	0	0	0	48	0	0	0	0	48
1969	0	0	0	0	0	0	0	0	0	0	0	0	0
1970	0	0	0	0	0	0	0	48	0	0	0	0	48
1971	0	0	0	0	0	0	0	64	0	0	0	0	64
1974	0	0	0	0	0	0	0	64	0	0	0	0	64
1975	0	0	0	0	0	0	0	80	0	0	0	0	80
1982	0	0	0	0	0	0	0	0	0	0	0	0	0
1983	0	0	0	0	0	0	0	48	0	0	0	0	48
1984	0	0	0	0	0	0	0	48	0	0	0	0	48
1986	0	0	0	0	0	0	0	64	0	0	0	0	64
Average	0	0	0	0	0	0	0	42	0	0	0	0	42

# Preliminary ERPP Modeling Results and SWP/CVP System Evaluation

**Merced River Monthly ERPP Water Acquisitions - Critical Years**  
 (Thousand Acre-Feet)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
1924	0	0	0	0	0	0	0	0	0	0	0	0	0
1929	0	0	0	0	0	0	0	0	0	0	0	0	0
1931	0	0	0	0	0	0	0	0	0	0	0	0	0
1933	0	0	0	0	0	0	0	0	0	0	0	0	0
1934	0	0	0	0	0	0	0	0	0	0	0	0	0
1976	0	0	0	0	0	0	0	0	0	0	0	0	0
1977	0	0	0	0	0	0	0	0	0	0	0	0	0
1988	0	0	0	0	0	0	0	0	0	0	0	0	0
1990	0	0	0	0	0	0	0	0	0	0	0	0	0
1991	0	0	0	0	0	0	0	0	0	0	0	0	0
1992	0	0	0	0	0	0	0	0	0	0	0	0	0
1994	0	0	0	0	0	0	0	0	0	0	0	0	0
Average	0	0	0	0	0	0	0	0	0	0	0	0	0

## Preliminary ERPP Modeling Results and SWP/CVP System Evaluation

**Merced River Monthly ERPP Water Acquisitions - Dry Years**  
(Thousand Acre-Feet)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
1925	0	0	0	0	0	0	0	32	0	0	0	0	32
1926	0	0	0	0	0	0	0	0	16	0	0	0	16
1930	0	0	0	0	0	0	0	0	0	0	0	0	0
1932	0	0	0	0	0	0	0	0	32	0	0	0	32
1939	0	0	0	0	0	0	0	0	16	0	0	0	16
1944	0	0	0	0	0	0	0	48	0	0	0	0	48
1947	0	0	0	0	0	0	0	16	0	0	0	0	16
1949	0	0	0	0	0	0	0	32	0	0	0	0	32
1955	0	0	0	0	0	0	0	0	16	0	0	0	16
1960	0	0	0	0	0	0	0	0	0	0	0	0	0
1961	0	0	0	0	0	0	0	0	0	0	0	0	0
1964	0	0	0	0	0	0	0	0	0	0	0	0	0
1981	0	0	0	0	0	0	0	16	0	0	0	0	16
1985	0	0	0	0	0	0	0	16	0	0	0	0	16
1987	0	0	0	0	0	0	0	0	0	0	0	0	0
1989	0	0	0	0	0	0	0	0	0	0	0	0	0
Average	0	0	0	0	0	0	0	15	0	0	0	0	15

# Preliminary ERPP Modeling Results and SWP/CVP System Evaluation

**Merced River Monthly ERPP Water Acquisitions - Below Normal Years**  
(Thousand Acre-Feet)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
1923	0	0	0	0	0	0	48	0	0	0	0	0	48
1935	0	0	0	0	0	0	0	16	0	0	0	0	16
1936	0	0	0	0	0	0	0	16	0	0	0	0	16
1937	0	0	0	0	0	0	0	32	0	0	0	0	32
1945	0	0	0	0	0	0	0	48	0	0	0	0	48
1946	0	0	0	0	0	0	0	32	0	0	0	0	32
1948	0	0	0	0	0	0	0	32	0	0	0	0	32
1950	0	0	0	0	0	0	0	16	0	0	0	0	16
1959	0	0	0	0	0	0	0	16	0	0	0	0	16
1962	0	0	0	0	0	0	0	16	0	0	0	0	16
1966	0	0	0	0	0	0	0	32	0	0	0	0	32
1968	0	0	0	0	0	0	0	16	0	0	0	0	16
1972	0	0	0	0	0	0	0	16	0	0	0	0	16
1979	0	0	0	0	0	0	0	32	0	0	0	0	32
Average	0	0	0	0	0	0	26	0	0	0	0	0	26

# Preliminary ERPP Modeling Results and SWP/CVP System Evaluation

**Merced River Monthly ERPP Water Acquisitions - Above Normal Years**  
(Thousand Acres-Feet)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
1922	0	0	0	0	0	0	0	64	0	0	0	0	64
1928	0	0	0	0	0	0	0	32	0	0	0	0	32
1940	0	0	0	0	0	0	0	32	0	0	0	0	32
1951	0	0	0	0	0	0	0	48	0	0	0	0	48
1954	0	0	0	0	0	0	0	48	0	0	0	0	48
1957	0	0	0	0	0	0	0	48	0	0	0	0	48
1973	0	0	0	0	0	0	0	16	0	0	0	0	16
1978	0	0	0	0	0	0	0	64	0	0	0	0	64
1980	0	0	0	0	0	0	0	64	0	0	0	0	64
1983	0	0	0	0	0	0	0	32	0	0	0	0	32
<b>Average</b>	<b>0</b>	<b>45</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>45</b>						

## Preliminary ERPP Modeling Results and SWP/CVP System Evaluation

**Merced River Monthly ERPP Water Acquisitions - Wet Years**  
(Thousand Acre-Feet)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
1927	0	0	0	0	0	0	0	32	0	0	0	0	32
1938	0	0	0	0	0	0	0	0	0	0	0	0	0
1941	0	0	0	0	0	0	0	32	0	0	0	0	32
1942	0	0	0	0	0	0	0	64	0	0	0	0	64
1943	0	0	0	0	0	0	0	48	0	0	0	0	48
1952	0	0	0	0	0	0	0	0	0	0	0	0	0
1953	0	0	0	0	0	0	0	48	0	0	0	0	48
1956	0	0	0	0	0	0	0	64	0	0	0	0	64
1958	0	0	0	0	0	0	0	16	0	0	0	0	16
1963	0	0	0	0	0	0	0	32	0	0	0	0	32
1965	0	0	0	0	0	0	0	64	0	0	0	0	64
1967	0	0	0	0	0	0	0	32	0	0	0	0	32
1969	0	0	0	0	0	0	0	0	0	0	0	0	0
1970	0	0	0	0	0	0	0	48	0	0	0	0	48
1971	0	0	0	0	0	0	0	48	0	0	0	0	48
1974	0	0	0	0	0	0	0	48	0	0	0	0	48
1975	0	0	0	0	0	0	0	64	0	0	0	0	64
1982	0	0	0	0	0	0	0	16	0	0	0	0	16
1983	0	0	0	0	0	0	0	16	0	0	0	0	16
1984	0	0	0	0	0	0	0	48	0	0	0	0	48
1986	0	0	0	0	0	0	0	48	0	0	0	0	48
<b>Average</b>	0	0	0	0	0	0	0	37	0	0	0	0	37

## **APPENDIX F**

**1976 – 1991**

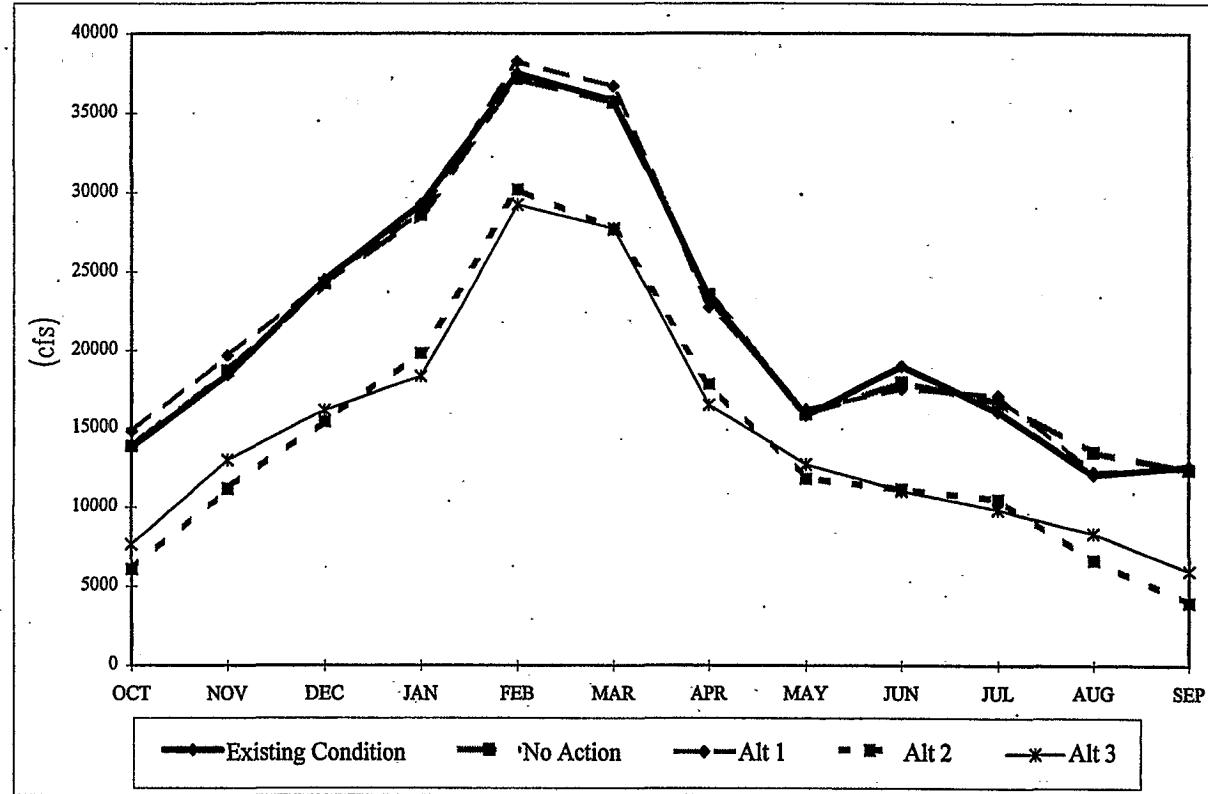
### **DWRSIM AVERAGE MONTHLY VALUES**

**A COMPARISON OF EXISTING CONDITIONS (558),  
NO ACTION (516), ALTERNATIVE 1 (531),  
ALTERNATIVE 2 (532), ALTERNATIVE 3 –  
10,000 CFS (567), ALTERNATIVE 3 – 15,000 CFS (551)**

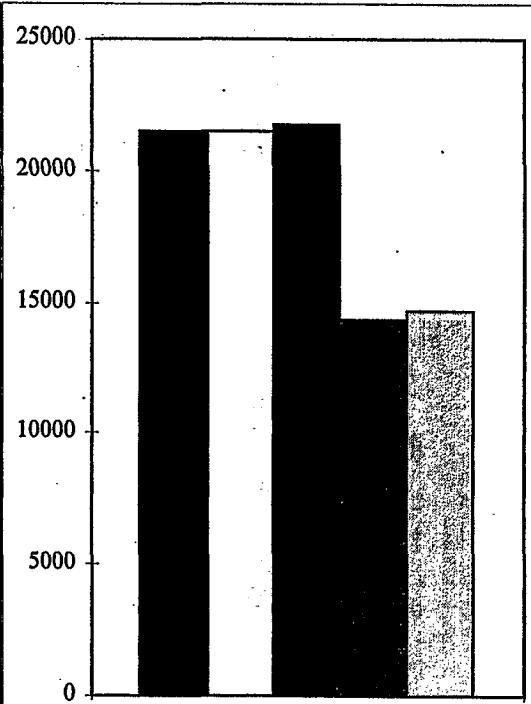
**Comparison of Green's Landing Under Various Delta Alternatives**

Data Selected from WYear1975 thru 1991

**Average Monthly Values**



**Average Annual Average Values**

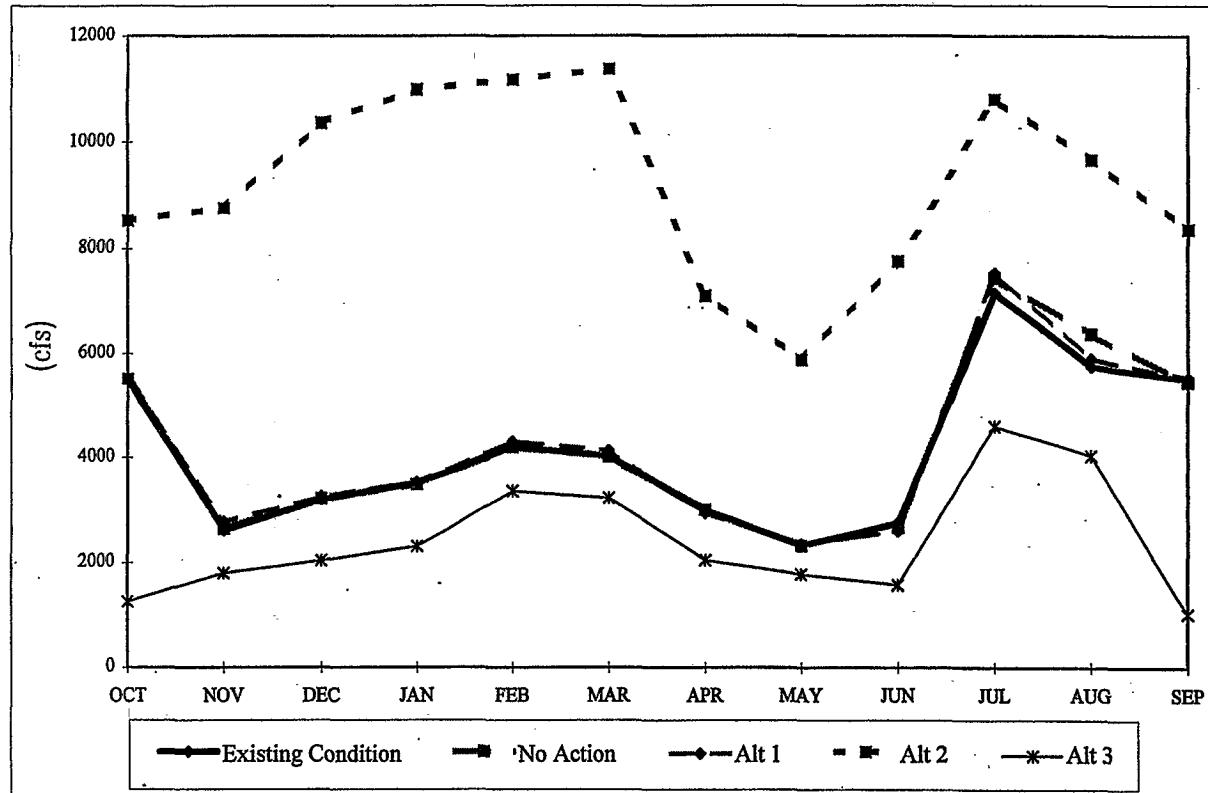


Case	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	SUMMARY	Case Description
Existing Condition	13826.2	18427.4	24499.3	29242.4	37524.1	35771.9	23368.2	15814.4	18961.7	16035.4	12024.1	12613.9	21509.1	Existing Condition
No Action	13837.6	18673.1	24274.0	28567.1	37195.4	35702.9	23526.4	15882.3	17933.8	16680.1	13463.1	12344.3	21506.7	No Action
Alt 1	14831.5	19673.6	24426.9	28787.5	38236.2	36710.8	22764.8	16203.8	17518.9	17080.1	12217.9	12452.8	21742.1	Alt 1
Alt 2	6086.4	11157.4	15446.6	19825.3	30167.5	27668.6	17797.0	11795.9	11100.5	10490.8	6649.6	3980.3	14347.1	Alt 2
Alt 3	7653.4	12974.0	16160.7	18335.2	29210.6	27717.9	16478.2	12684.9	11015.8	9817.3	8322.9	5967.4	14694.8	Alt 3

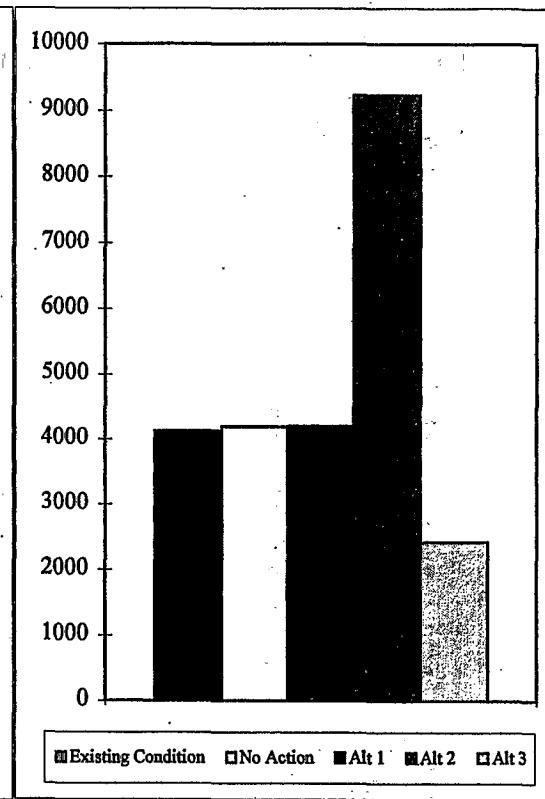
**Comparison of Cross Channel Under Various Delta Alternatives**

**Data Selected from WYear1975 thru 1991**

**Average Monthly Values**



**Average Annual Average Values**

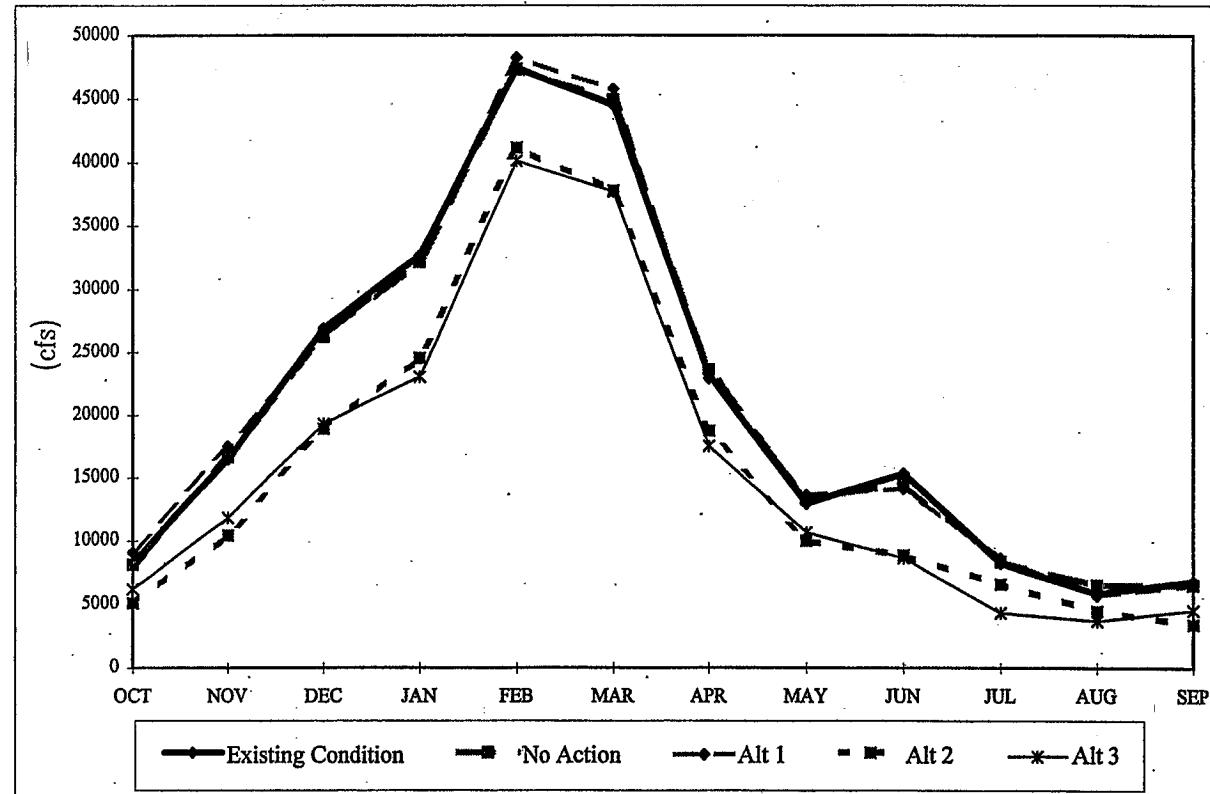


Case	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	SUMMARY	Case Description
Existing Condition	5494.6	2619.5	3206.8	3506.8	4201.1	4024.0	2986.6	2323.4	2753.6	7160.0	5763.4	5501.6	4128.5	Existing Condition
No Action	5512.7	2645.8	3208.4	3485.2	4189.9	4022.4	2994.8	2317.6	2665.0	7446.1	6377.4	5450.5	4193.0	No Action
Alt 1	5538.0	2769.5	3258.4	3527.6	4310.9	4134.6	2936.9	2349.7	2602.1	7543.0	5904.9	5544.4	4201.7	Alt 1
Alt 2	8527.8	8766.0	10369.6	10992.1	11174.9	11384.8	7099.8	5883.4	7761.9	10820.4	9672.5	8370.5	9235.3	Alt 2
Alt 3	1259.8	1798.2	2038.6	2306.1	3357.6	3227.9	2045.3	1772.1	1572.5	4610.0	4037.3	1024.6	2420.8	Alt 3

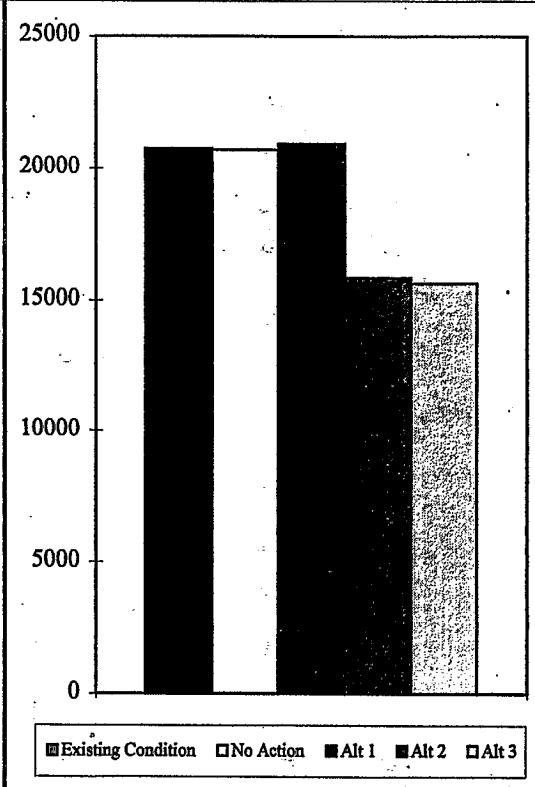
### Comparison of Rio Vista Under Various Delta Alternatives

Data Selected from WYear1975 thru 1991

Average Monthly Values



Average Annual Average Values

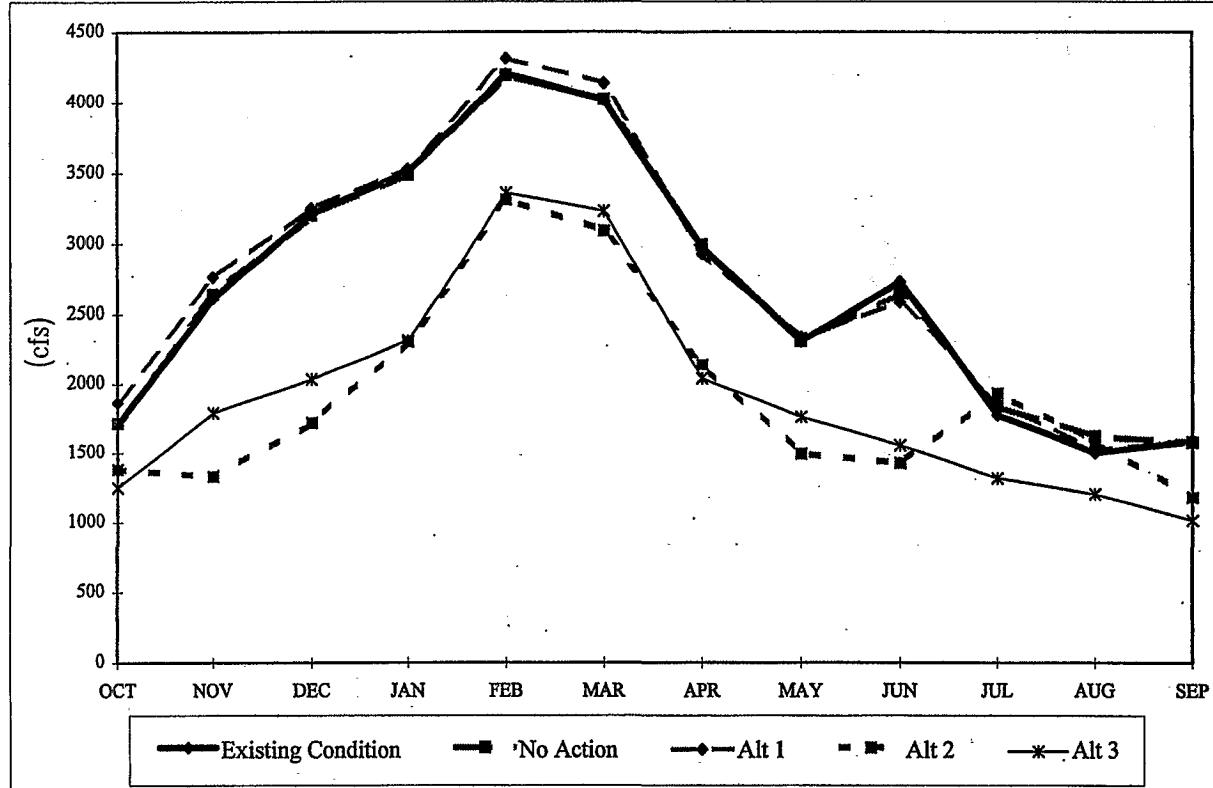


Case	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	SUMMARY	Case Description
Existing Condition	8271.1	16465.9	26933.0	32672.9	47456.8	44543.0	23253.5	12932.4	15332.1	8262.3	5899.4	6856.3	20739.9	Existing Condition
No Action	8158.3	16653.6	26273.0	32145.8	47333.6	44912.7	23651.2	13304.4	14508.0	8366.9	6527.7	6535.6	20697.6	No Action
Alt 1	9119.6	17523.7	26370.3	32315.3	48244.3	45798.9	22941.3	13592.8	14147.8	8663.6	5747.6	6543.6	20917.4	Alt 1
Alt 2	5117.1	10438.7	18921.6	24578.4	41174.4	37798.1	18763.7	10026.1	8884.6	6622.7	4496.3	3440.9	15855.2	Alt 2
Alt 3	6217.0	11793.1	19320.8	23075.4	40164.9	37707.4	17540.9	10664.8	8670.3	4327.7	3714.9	4573.7	15647.6	Alt 3

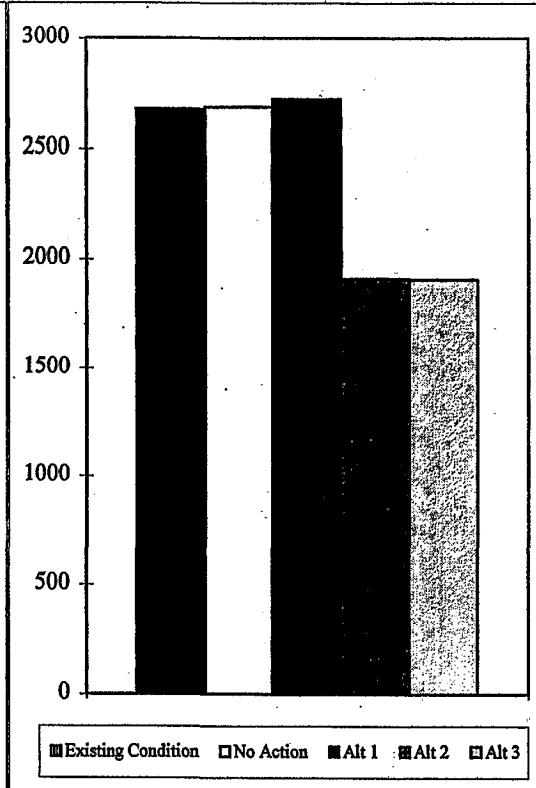
**Comparison of Georgiana Slough Under Various Delta Alternatives**

**Data Selected from WYear1975 thru 1991**

**Average Monthly Values**



**Average Annual Average Values**

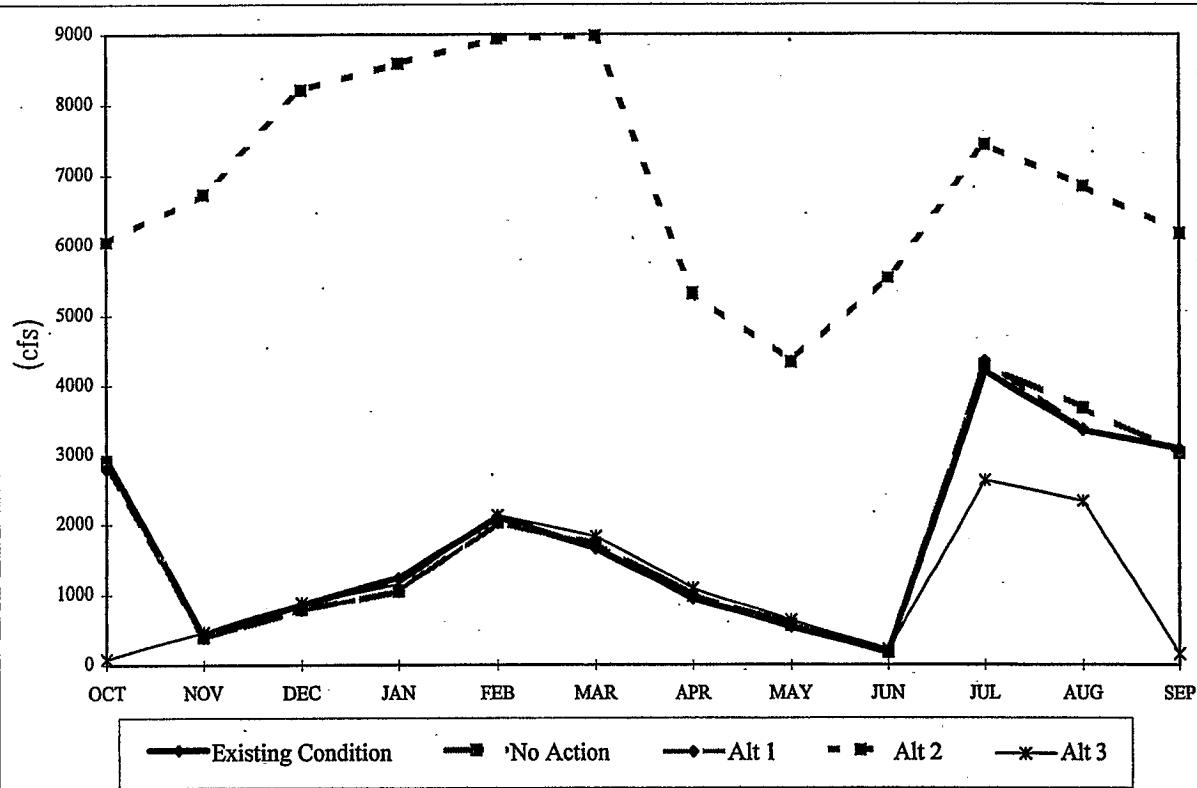


Case	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	SUMMARY	Case Description
Existing Condition	1707.0	2613.3	3210.7	3509.2	4201.6	4018.8	2975.5	2306.5	2729.1	1775.9	1502.6	1588.1	2678.2	Existing Condition
No Action	1715.1	2639.7	3203.2	3490.2	4192.4	4023.6	2989.3	2307.2	2648.9	1835.5	1619.3	1579.3	2687.0	No Action
Alt 1	1864.6	2763.4	3253.1	3532.4	4313.4	4135.7	2931.5	2339.2	2585.8	1860.6	1523.4	1597.8	2725.1	Alt 1
Alt 2	1384.9	1331.8	1721.1	2303.5	3312.6	3091.8	2138.8	1496.3	1429.3	1932.9	1582.4	1184.3	1909.1	Alt 2
Alt 3	1252.8	1792.0	2033.3	2311.1	3359.9	3229.2	2040.0	1761.7	1556.3	1317.1	1205.2	1017.3	1906.3	Alt 3

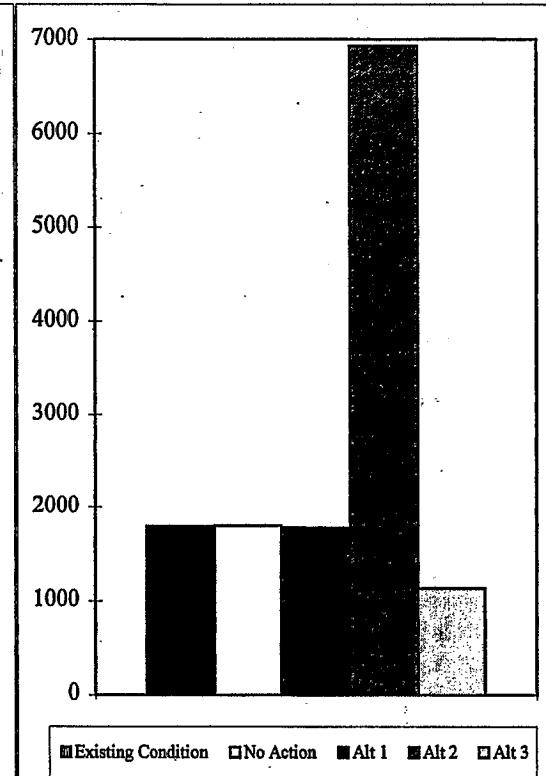
**Comparison of North Mokelumne Under Various Delta Alternatives**

**Data Selected from WYear1975 thru 1991**

**Average Monthly Values**



**Average Annual Average Values**

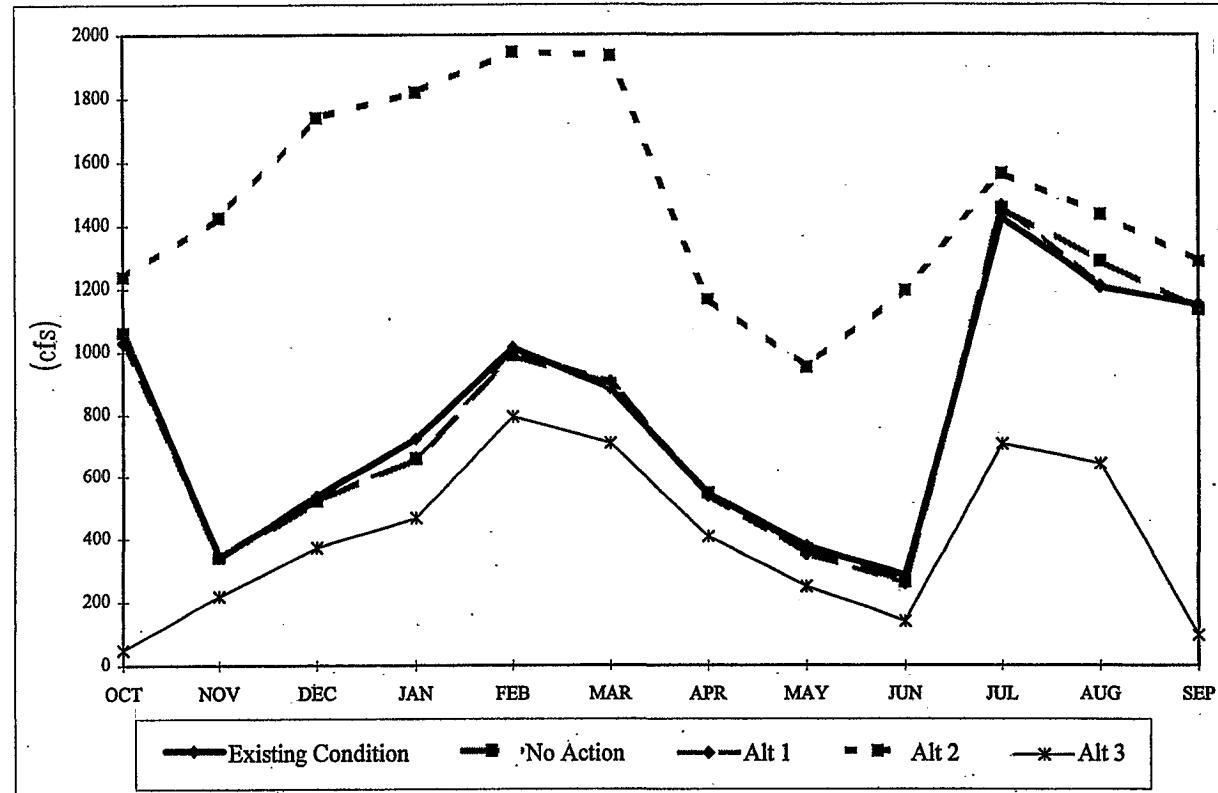


Case	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	SUMMARY	Case Description
Existing Condition	2930.8	395.8	865.1	1238.1	2108.1	1654.0	947.6	542.1	172.3	4207.3	3354.1	3092.5	1792.3	Existing Condition
No Action	2891.5	387.9	790.9	1056.3	2035.1	1725.1	987.3	567.3	178.8	4293.6	3676.4	3024.7	1801.3	No Action
Alt 1	2797.1	389.2	787.8	1051.7	2023.9	1715.6	998.3	579.9	183.7	4354.9	3377.1	3083.1	1778.5	Alt 1
Alt 2	6049.9	6726.2	8210.3	8589.1	8941.9	8981.4	5319.1	4346.3	5541.4	7436.9	6845.4	6177.0	6930.4	Alt 2
Alt 3	82.9	471.9	885.3	1149.9	2130.6	1833.8	1081.5	629.1	216.2	2632.0	2333.1	156.8	1133.6	Alt 3

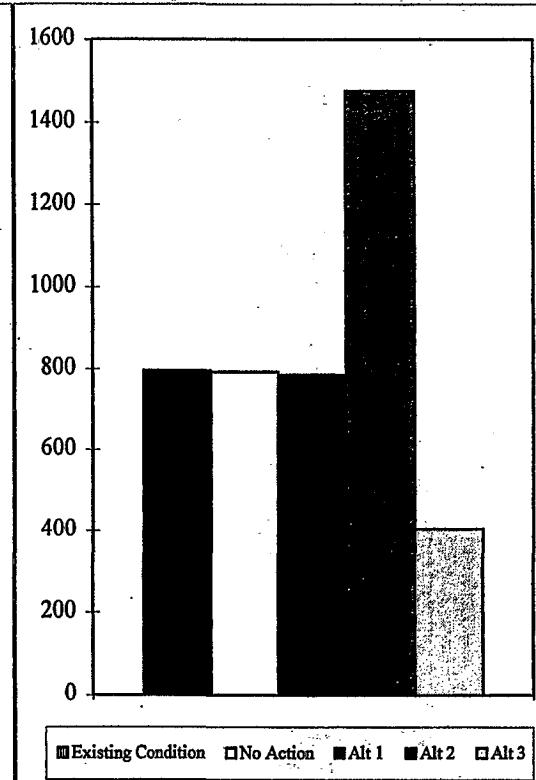
**Comparison of S Mok@ New Hope Tract Under Various Delta Alternatives**

**Data Selected from WYear1975 thru 1991**

**Average Monthly Values**



**Average Annual Average Values**

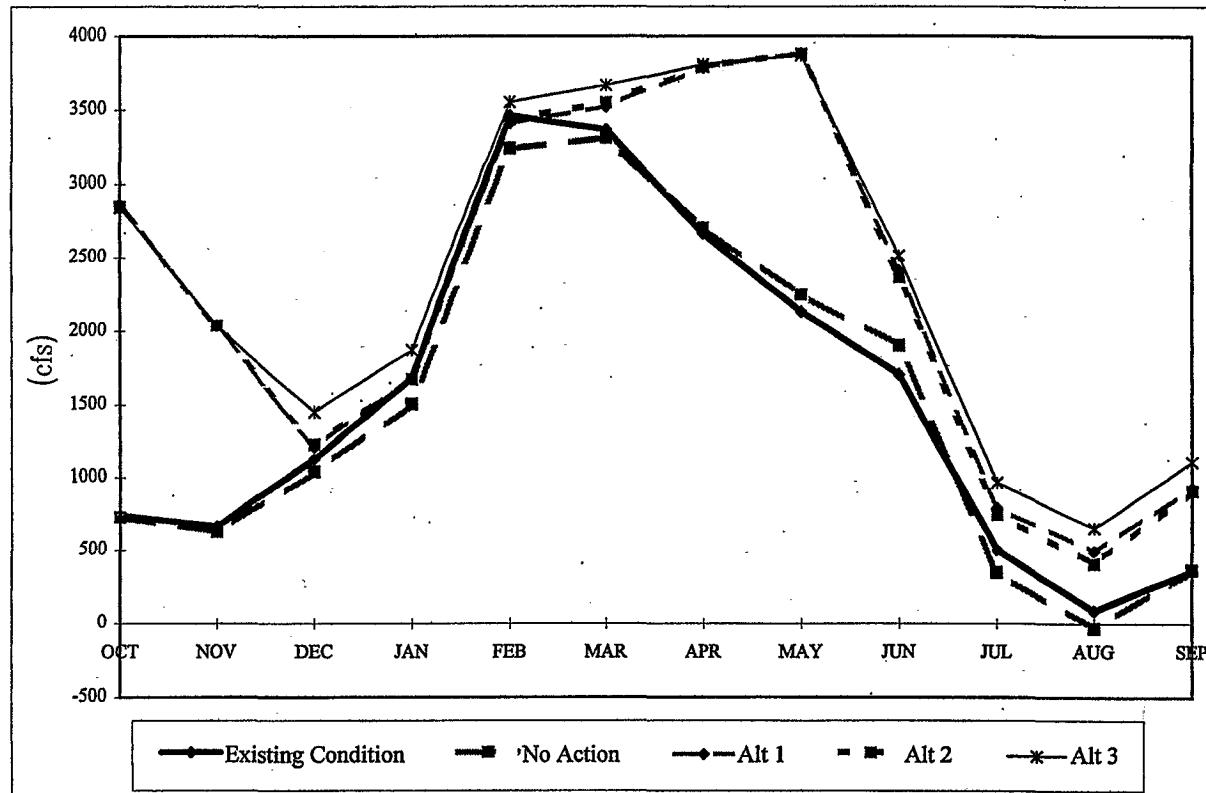


Case	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	SUMMARY	Case Description
Existing Condition	1066.6	342.3	538.9	722.8	1013.4	884.2	543.8	375.3	283.3	1423.3	1205.3	1147.5	795.6	Existing Condition
No Action	1059.8	341.0	521.8	658.4	988.2	897.3	547.5	364.3	262.5	1452.9	1286.6	1134.1	792.9	No Action
Alt 1	1029.1	340.3	524.6	662.8	999.4	906.8	536.6	351.5	257.6	1463.4	1208.9	1149.5	785.9	Alt 1
Alt 2	1238.4	1425.6	1740.4	1820.6	1945.8	1934.8	1166.0	951.4	1195.3	1564.5	1436.0	1285.9	1475.4	Alt 2
Alt 3	48.4	218.1	372.6	468.1	794.4	707.8	406.7	249.2	139.4	705.0	641.1	95.4	403.8	Alt 3

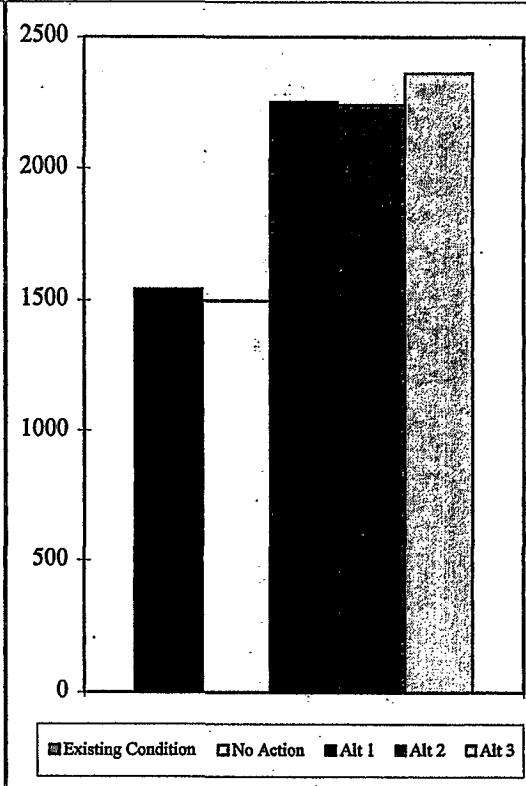
**Comparison of SJR@Brandt Brdg Under Various Delta Alternatives**

**Data Selected from WYear1975 thru 1991**

**Average Monthly Values**



**Average Annual Average Values**

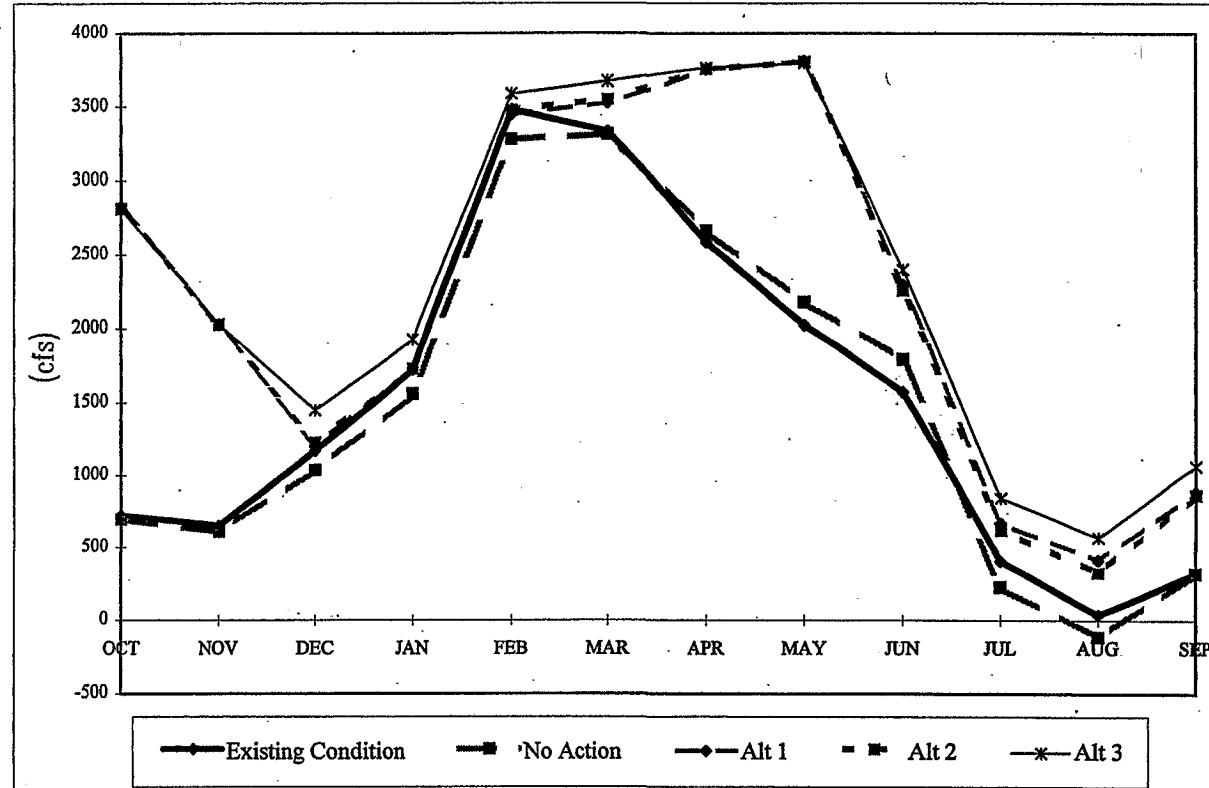


Case	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	SUMMARY	Case Description
Existing Condition	740.9	662.1	1126.3	1684.1	3464.1	3364.9	2662.1	2135.9	1706.2	499.8	86.9	356.3	1540.8	Existing Condition
No Action	725.9	624.0	1039.3	1503.5	3240.0	3309.2	2700.6	2248.8	1903.9	346.9	-34.3	363.2	1497.6	No Action
Alt 1	2858.3	2038.0	1208.4	1683.0	3411.4	3521.6	3791.7	3887.1	2411.8	789.3	492.5	929.3	2251.9	Alt 1
Alt 2	2841.9	2040.9	1229.8	1676.6	3438.2	3547.6	3795.5	3881.3	2373.9	745.1	407.6	907.8	2240.5	Alt 2
Alt 3	2843.6	2040.9	1452.1	1874.1	3552.3	3669.4	3808.0	3868.9	2513.4	964.5	649.1	1107.4	2362.0	Alt 3

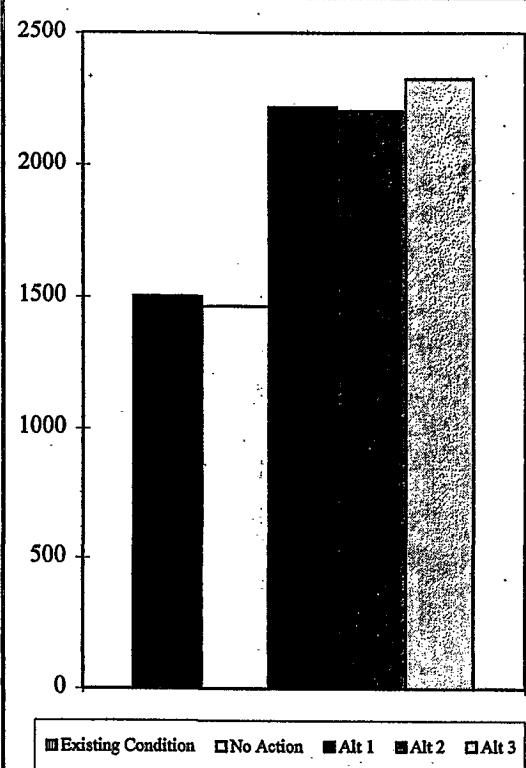
**Comparison of SJR@Stockton Under Various Delta Alternatives**

**Data Selected from WYear1975 thru 1991**

**Average Monthly Values**



**Average Annual Average Values**

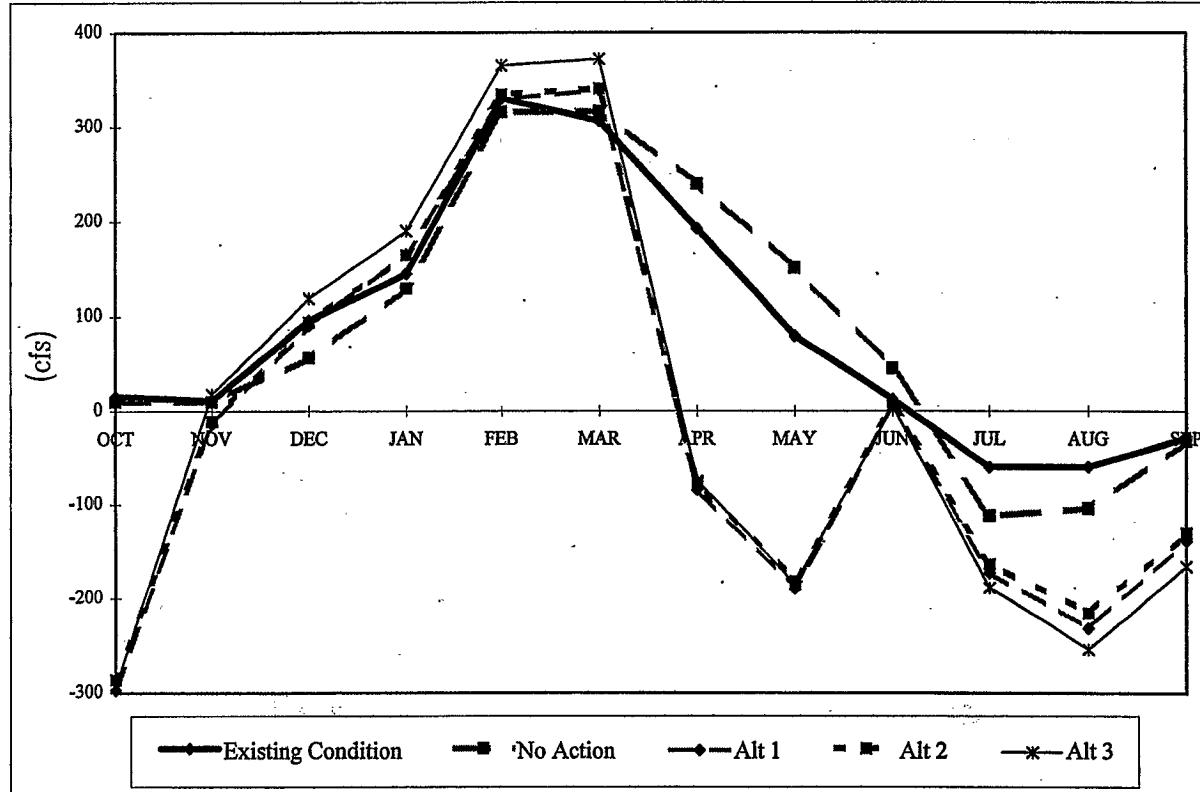


Case	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	SUMMARY	Case Description
Existing Condition	723.1	651.8	1169.4	1722.4	3483.0	3334.2	2588.3	2022.0	1570.5	407.3	35.8	320.6	1502.3	Existing Condition
No Action	693.8	613.0	1035.2	1555.1	3280.3	3315.2	2660.3	2178.8	1790.9	225.4	-113.3	320.2	1462.9	No Action
Alt 1	2826.3	2026.9	1204.3	1734.3	3451.4	3527.6	3751.3	3817.1	2299.1	668.1	413.5	886.6	2217.2	Alt 1
Alt 2	2809.7	2029.8	1225.7	1728.0	3478.1	3553.6	3755.3	3811.1	2261.0	623.8	328.7	865.1	2205.8	Alt 2
Alt 3	2811.3	2029.9	1447.8	1925.4	3592.3	3675.4	3767.7	3798.9	2400.4	843.4	570.2	1064.6	2327.3	Alt 3

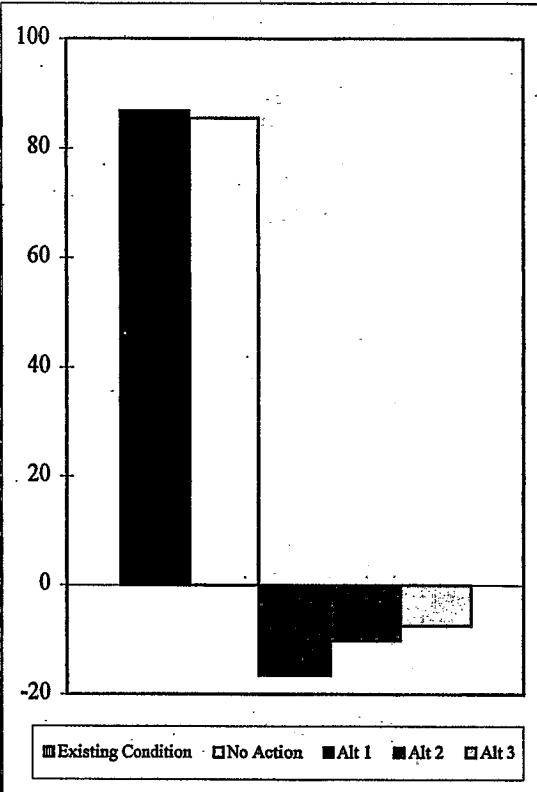
**Comparison of Middle R@ Tracy Rd Under Various Delta Alternatives**

**Data Selected from WYear1975 thru 1991**

**Average Monthly Values**



**Average Annual Average Values**

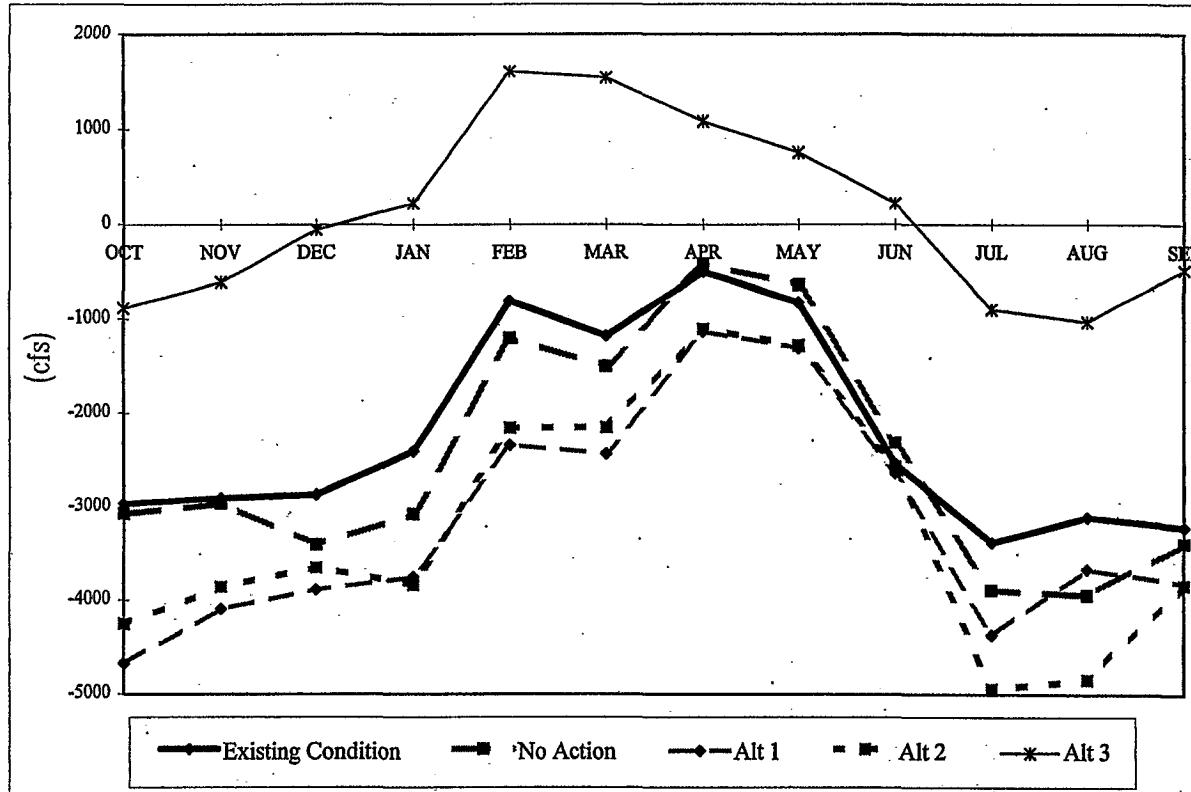


Case	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	SUMMARY	Case Description
Existing Condition	15.8	11.3	95.9	145.1	330.4	306.4	192.5	79.1	12.4	-59.8	-59.7	-28.5	86.8	Existing Condition
No Action	10.1	9.8	56.1	129.3	315.8	316.5	239.9	150.8	44.9	-111.6	-103.9	-32.1	85.5	No Action
Alt 1	-296.8	-13.8	90.2	165.6	329.4	338.9	-84.3	-189.6	4.4	-172.5	-231.5	-138.4	-16.5	Alt 1
Alt 2	-285.5	-10.8	93.8	164.5	334.6	340.7	-76.9	-181.8	6.4	-163.3	-215.3	-129.9	-10.3	Alt 2
Alt 3	-293.3	17.8	118.8	190.1	365.3	372.3	-74.8	-185.1	5.3	-188.4	-253.8	-165.7	-7.6	Alt 3

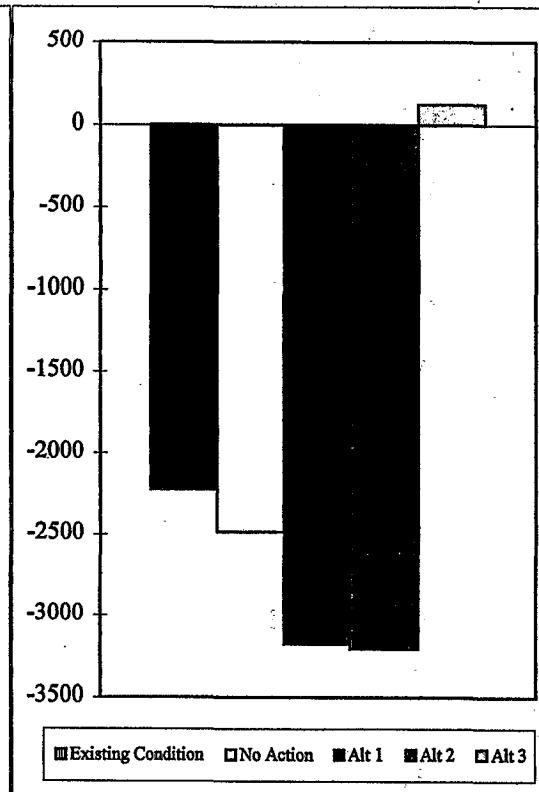
**Comparison of Middle R@Bacon Under Various Delta Alternatives**

Data Selected from WYear1975 thru 1991

**Average Monthly Values**



**Average Annual Average Values**

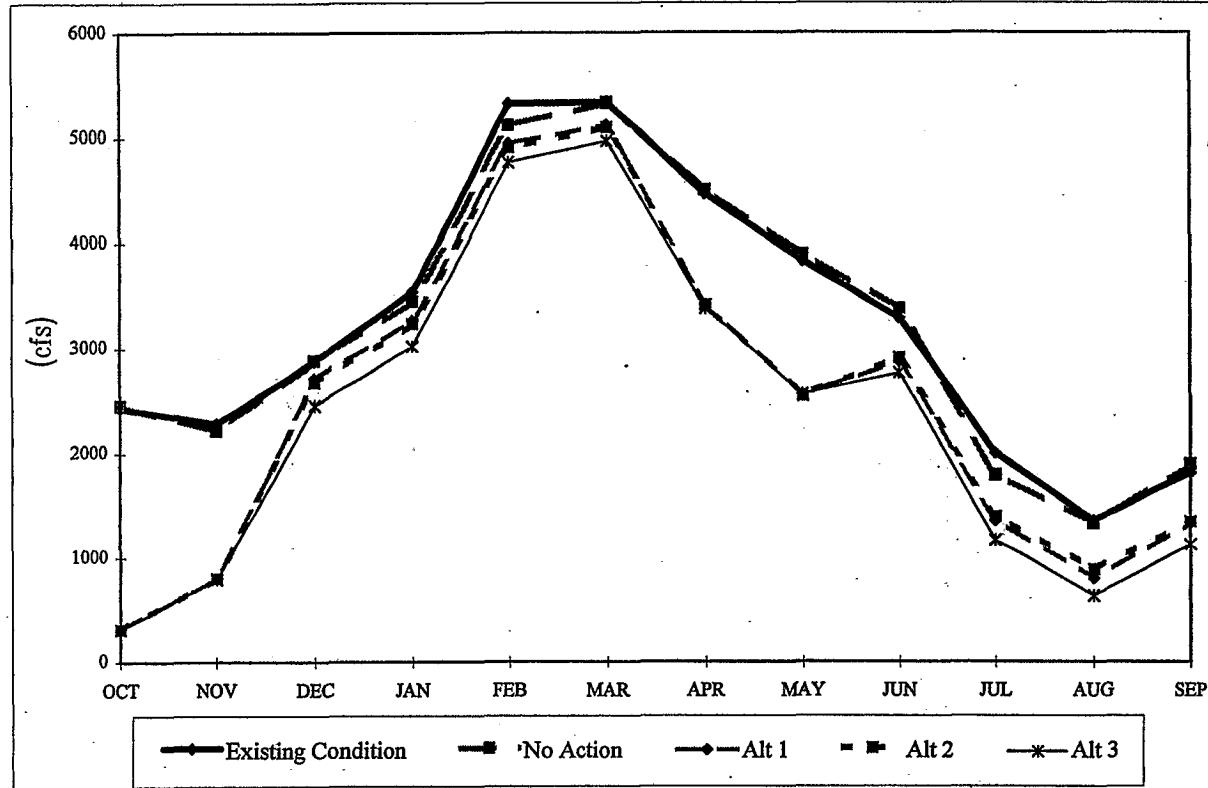


Case	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	SUMMARY	Case Description
Existing Condition	-2964.0	-2903.3	-2867.4	-2405.0	-811.4	-1182.5	-504.1	-827.8	-2536.6	-3381.9	-3115.6	-3218.1	-2226.5	Existing Condition
No Action	-3072.3	-2964.3	-3406.9	-3080.8	-1207.2	-1501.9	-419.6	-641.9	-2318.3	-3895.4	-3947.9	-3396.6	-2487.8	No Action
Alt 1	-4673.3	-4090.4	-3888.4	-3754.3	-2340.9	-2431.7	-1136.8	-1309.0	-2640.4	-4369.1	-3671.8	-3824.4	-3177.6	Alt 1
Alt 2	-4252.8	-3856.2	-3649.9	-3840.2	-2154.8	-2151.1	-1106.9	-1282.2	-2569.4	-4947.3	-4848.0	-3841.1	-3208.3	Alt 2
Alt 3	-890.3	-610.1	-56.1	220.6	1607.6	1538.7	1079.3	751.2	218.0	-901.7	-1034.2	-481.9	120.1	Alt 3

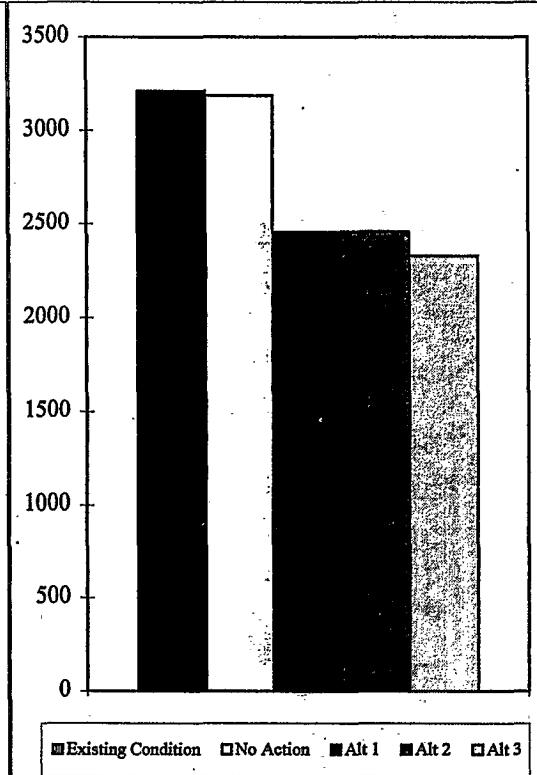
**Comparison of Old R@Head Under Various Delta Alternatives**

Data Selected from WYear1975 thru 1991

**Average Monthly Values**



**Average Annual Average Values**

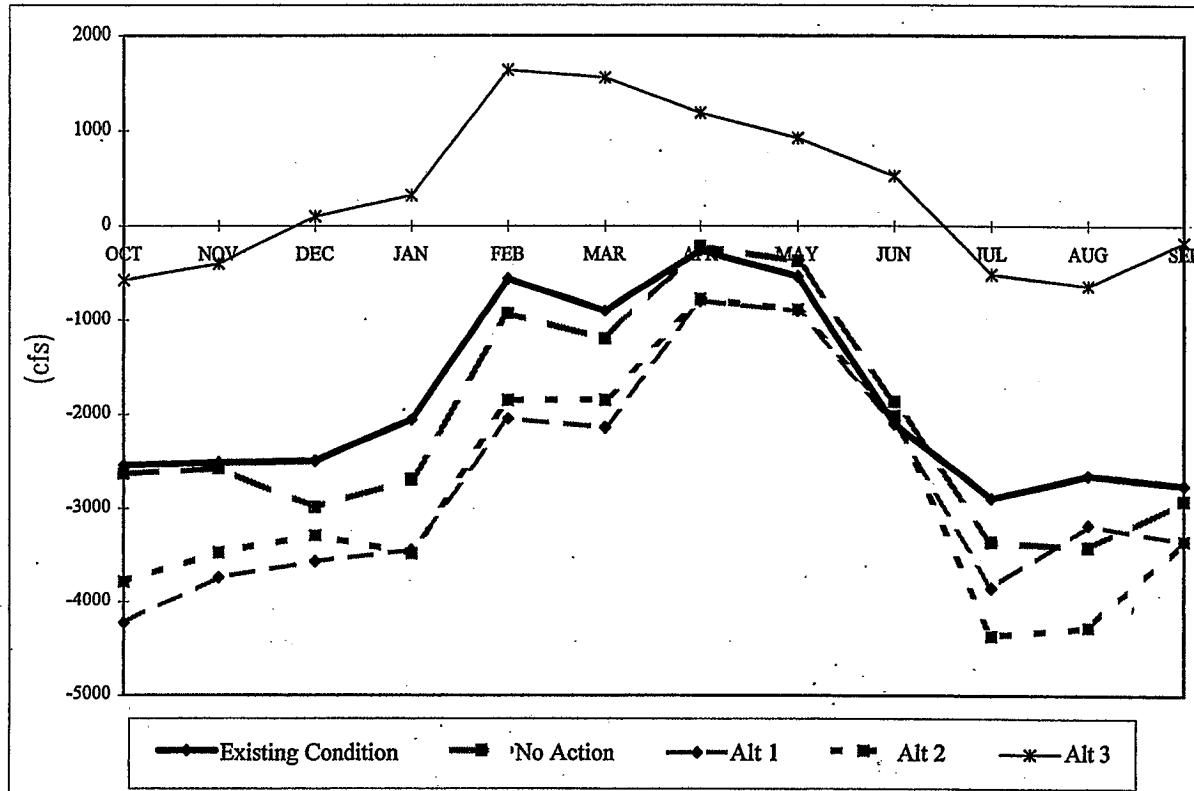


Case	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	SUMMARY	Case Description
Existing Condition	2432.8	2282.9	2875.8	3532.6	5327.6	5339.9	4463.5	3825.6	3283.4	1997.8	1353.6	1814.3	3210.8	Existing Condition
No Action	2455.1	2220.6	2882.1	3443.6	5120.9	5332.5	4502.4	3890.0	3376.1	1791.6	1322.8	1893.1	3185.9	No Action
Alt 1	317.4	804.8	2712.6	3263.2	4948.9	5120.1	3411.9	2553.7	2869.1	1349.2	798.3	1326.1	2456.3	Alt 1
Alt 2	315.9	804.3	2675.1	3231.0	4905.9	5098.6	3412.2	2547.0	2903.5	1392.7	882.6	1339.6	2459.0	Alt 2
Alt 3	313.3	796.3	2459.1	3018.5	4762.8	4970.5	3375.0	2557.0	2763.7	1163.2	631.2	1125.1	2328.0	Alt 3

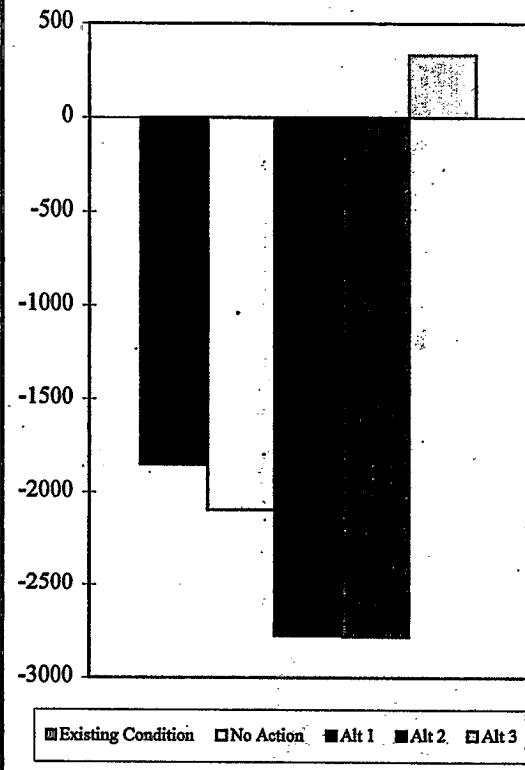
**Comparison of OLD R@ Bacon Is Under Various Delta Alternatives**

**Data Selected from WYear1975 thru 1991**

**Average Monthly Values**



**Average Annual Average Values**

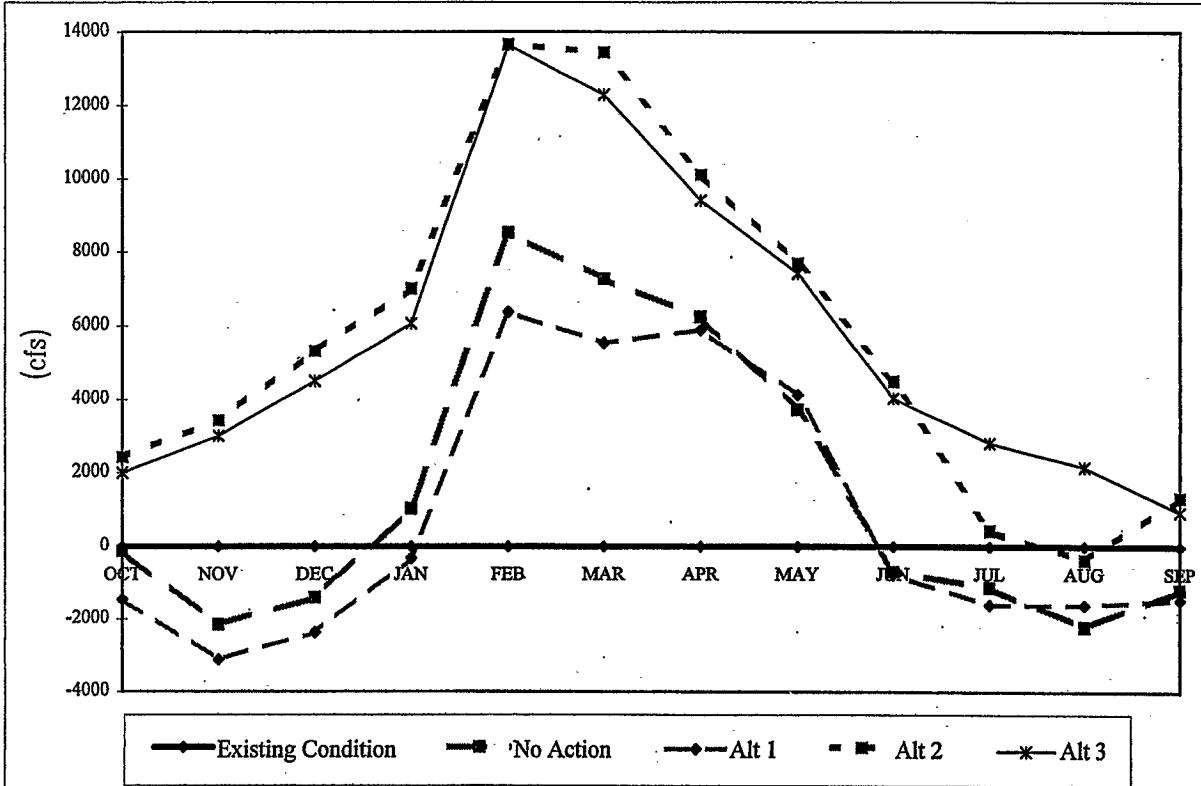


Case	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	SUMMARY	Case Description
Existing Condition	-2533.3	-2507.7	-2491.3	-2056.1	-557.7	-896.3	-256.4	-528.8	-2096.9	-2886.4	-2651.1	-2752.4	-1851.2	Existing Condition
No Action	-2630.1	-2570.3	-2986.8	-2689.3	-925.4	-1193.3	-214.1	-368.2	-1861.6	-3359.1	-3419.8	-2919.0	-2094.7	No Action
Alt 1	-4222.6	-3741.7	-3564.3	-3445.9	-2045.9	-2136.6	-789.2	-896.8	-2091.9	-3849.4	-3176.3	-3356.5	-2776.4	Alt 1
Alt 2	-3785.9	-3470.3	-3287.8	-3479.1	-1847.4	-1841.2	-769.9	-880.4	-2009.3	-4370.4	-4279.3	-3344.6	-2780.5	Alt 2
Alt 3	-570.6	-396.4	96.9	320.7	1640.8	1560.0	1188.6	923.5	524.1	-510.1	-635.9	-173.7	330.6	Alt 3

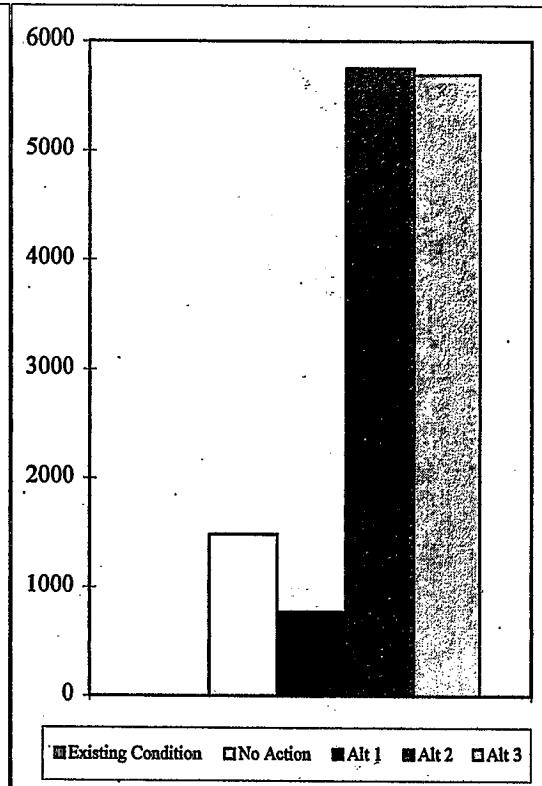
## Comparison of Qwest Under Various Delta Alternatives

Data Selected from WYear1975 thru 1991

Average Monthly Values



Average Annual Average Values

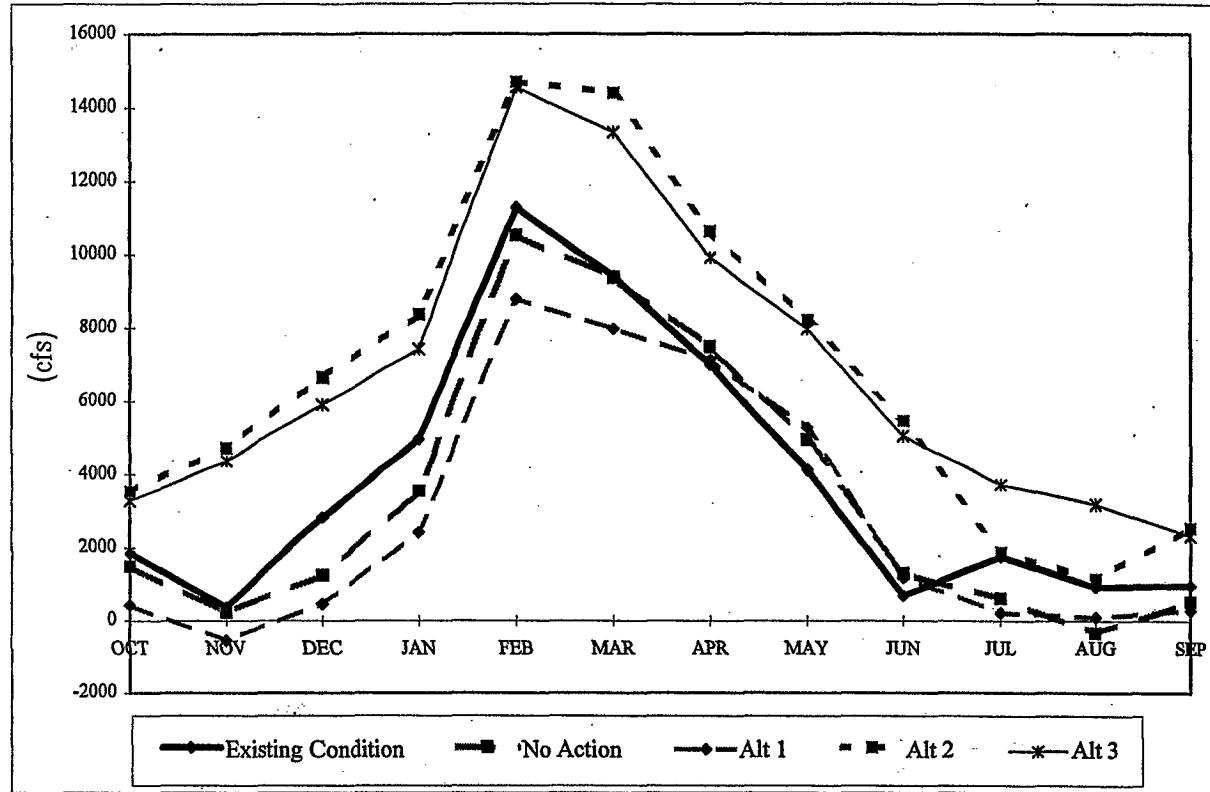


Case	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	SUMMARY	Case Description
Existing Condition	#DIV/0!	Existing Condition												
No Action	-137.4	-2147.3	-1398.1	1031.6	8525.0	7263.3	6247.0	3721.7	-690.1	-1130.0	-2216.3	-1192.8	1489.7	No Action
Alt 1	-1450.8	-3110.1	-2360.4	-317.3	6377.1	5553.4	5900.4	4129.8	-773.4	-1598.9	-1611.3	-1450.8	774.0	Alt 1
Alt 2	2430.3	3426.5	5321.8	7016.4	13680.7	13446.8	10119.5	7696.9	4491.4	439.0	-366.1	1335.0	5753.2	Alt 2
Alt 3	1997.7	3000.6	4498.9	6076.9	13651.9	12297.1	9410.8	7424.3	4034.0	2812.3	2156.4	947.3	5692.3	Alt 3

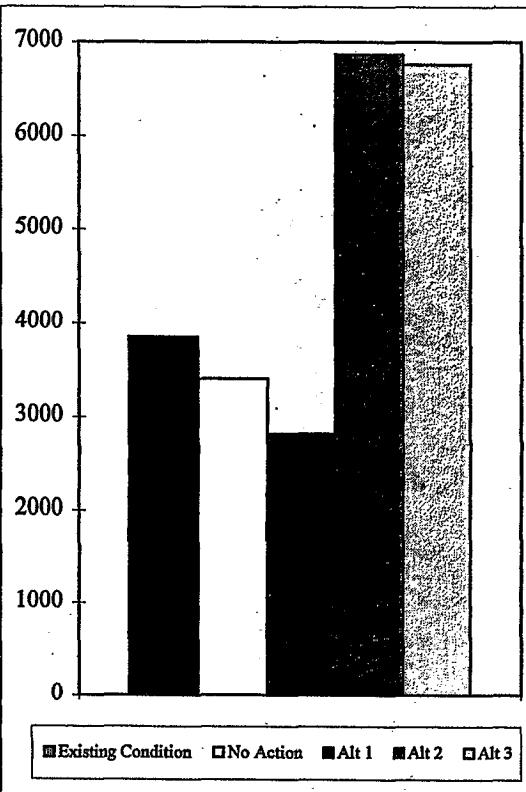
**Comparison of SJR@Antioch Under Various Delta Alternatives**

Data Selected from WYear1975 thru 1991

**Average Monthly Values**



**Average Annual Average Values**



Case	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	SUMMARY	Case Description
Existing Condition	1853.9	359.5	2842.1	4958.4	11275.3	9395.9	6987.3	4133.1	682.8	1761.6	930.1	977.9	3846.5	Existing Condition
No Action	1484.5	218.9	1247.1	3552.1	10514.7	9370.8	7489.1	4948.8	1300.8	608.4	-356.0	523.8	3408.6	No Action
Alt 1	414.4	-562.3	449.6	2428.8	8789.6	7976.1	7146.3	5281.1	1192.9	215.3	96.2	294.4	2810.2	Alt 1
Alt 2	3565.4	4726.2	6658.3	8376.9	14712.4	14403.4	10623.8	8232.9	5474.6	1891.3	1148.7	2561.0	6864.6	Alt 2
Alt 3	3287.6	4372.9	5909.5	7440.0	14551.3	13330.0	9914.6	7969.4	5047.7	3740.4	3194.0	2332.9	6757.5	Alt 3

## **APPENDIX G**

**1976 – 1991 (*Dry and Critical Years only*)**

### **DWRSIM AVERAGE MONTHLY VALUES**

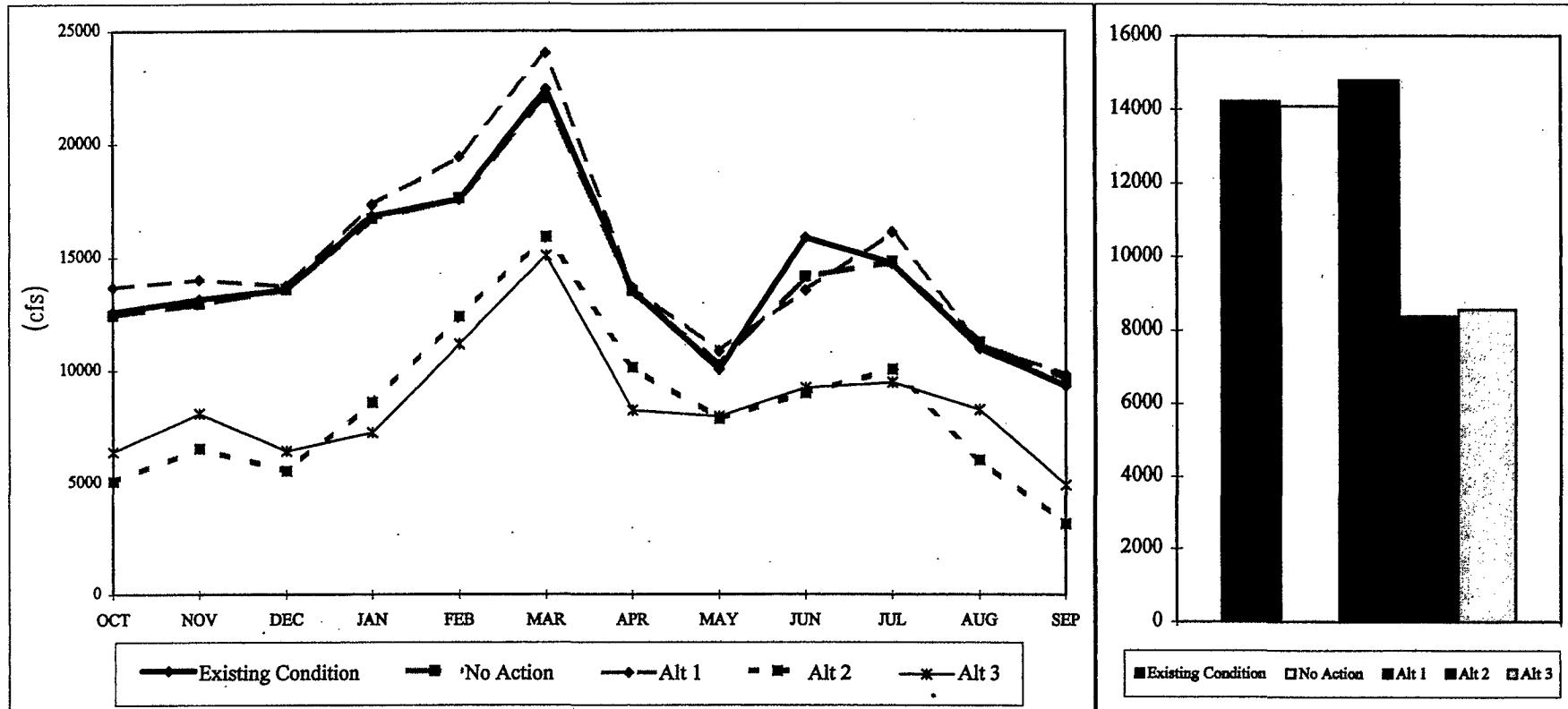
**A COMPARISON OF EXISTING CONDITIONS (558),  
NO ACTION (516), ALTERNATIVE 1 (531),  
ALTERNATIVE 2 (532), ALTERNATIVE 3 –  
10,000 CFS (567), ALTERNATIVE 3 – 15,000 CFS (551)**

### Comparison of Green's Landing Under Various Delta Alternatives

Data Selected from WYear1975 thru 1991 & 4<=WYType<=5

Average Monthly Values

Average Annual Average Values

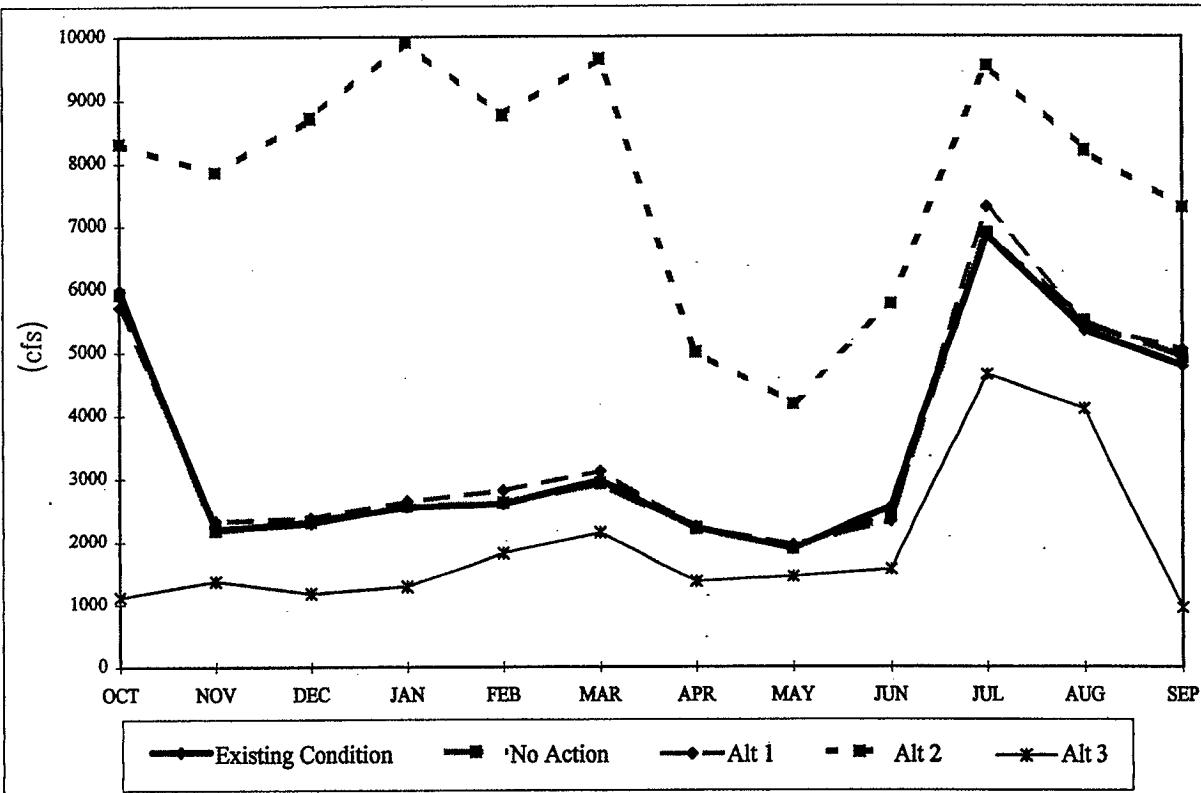


Case	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	SUMMARY	Case Description
Existing Condition	12586.9	13160.9	13589.2	16865.0	17566.9	22440.6	13555.1	10043.9	15879.4	14736.6	10987.9	9331.1	14228.6	Existing Condition
No Action	12437.8	12953.2	13609.9	16720.6	17630.8	22032.1	13532.4	10223.1	14147.0	14808.8	11225.1	9626.3	14078.9	No Action
Alt 1	13674.8	14025.7	13741.8	17334.0	19459.3	24026.3	13681.6	10853.7	13534.4	16114.9	11150.7	9820.3	14784.8	Alt 1
Alt 2	5078.6	6548.7	5551.7	8609.6	12382.6	15924.8	10144.4	7862.1	9009.8	10056.3	6030.1	3172.6	8364.3	Alt 2
Alt 3	6401.0	8113.0	6428.9	7254.0	11165.4	15094.3	8246.8	7974.6	9244.7	9478.6	8278.7	4914.9	8549.6	Alt 3

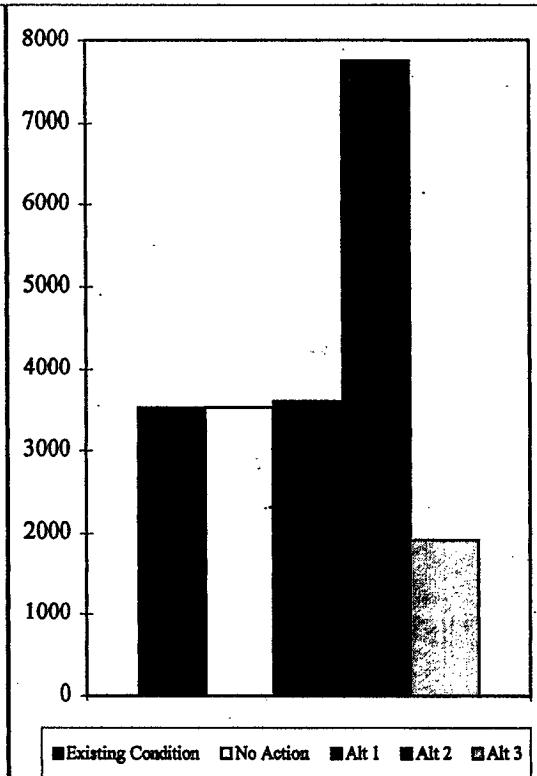
**Comparison of Cross Channel Under Various Delta Alternatives**

Data Selected from WYear1975 thru 1991 & 4<=WYType<=5

**Average Monthly Values**



**Average Annual Average Values**

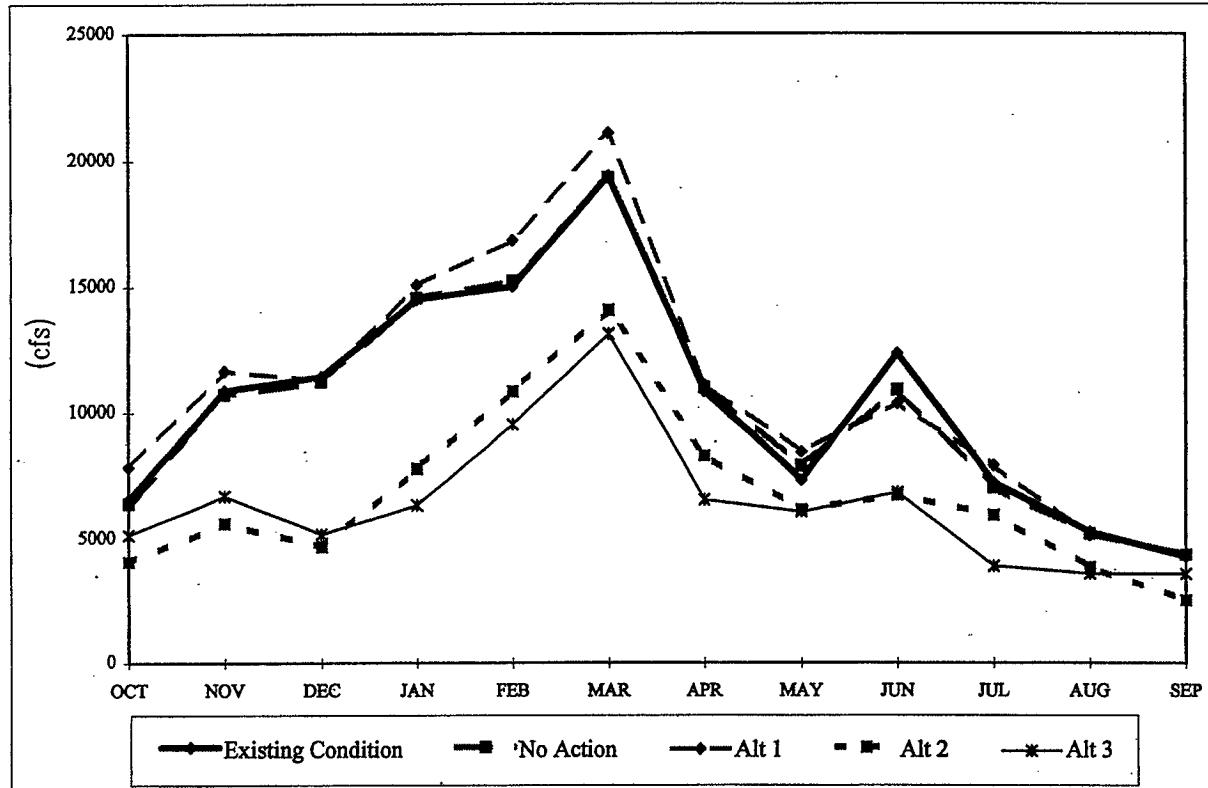


Case	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	SUMMARY	Case Description
Existing Condition	5985.3	2204.3	2305.7	2555.2	2606.7	2968.6	2223.0	1883.0	2556.8	6848.0	5354.4	4792.2	3523.6	Existing Condition
No Action	5924.1	2185.7	2318.8	2568.3	2619.3	2922.4	2214.8	1882.6	2419.2	6884.3	5485.7	4924.1	3529.1	No Action
Alt 1	5714.0	2322.8	2377.1	2648.2	2813.6	3123.1	2234.5	1948.6	2329.0	7296.1	5448.2	5039.7	3607.9	Alt 1
Alt 2	8307.2	7850.3	8708.9	9908.6	8762.9	9654.2	5002.7	4181.4	3765.1	9541.7	8197.3	7293.2	7764.5	Alt 2
Alt 3	1119.8	1367.2	1177.9	1283.1	1819.0	2151.2	1362.7	1439.9	1562.8	4644.9	4101.7	945.4	1914.6	Alt 3

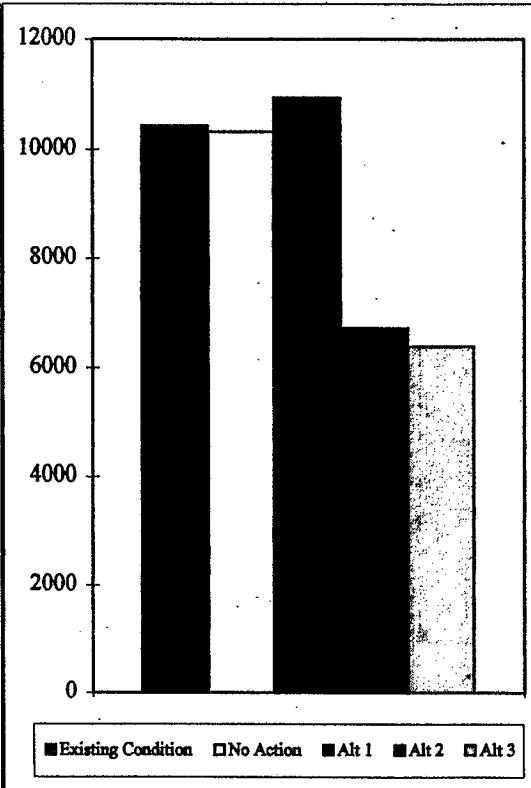
### Comparison of Rio Vista Under Various Delta Alternatives

Data Selected from WYear1975 thru 1991 & 4<=WYType<=5

Average Monthly Values



Average Annual Average Values

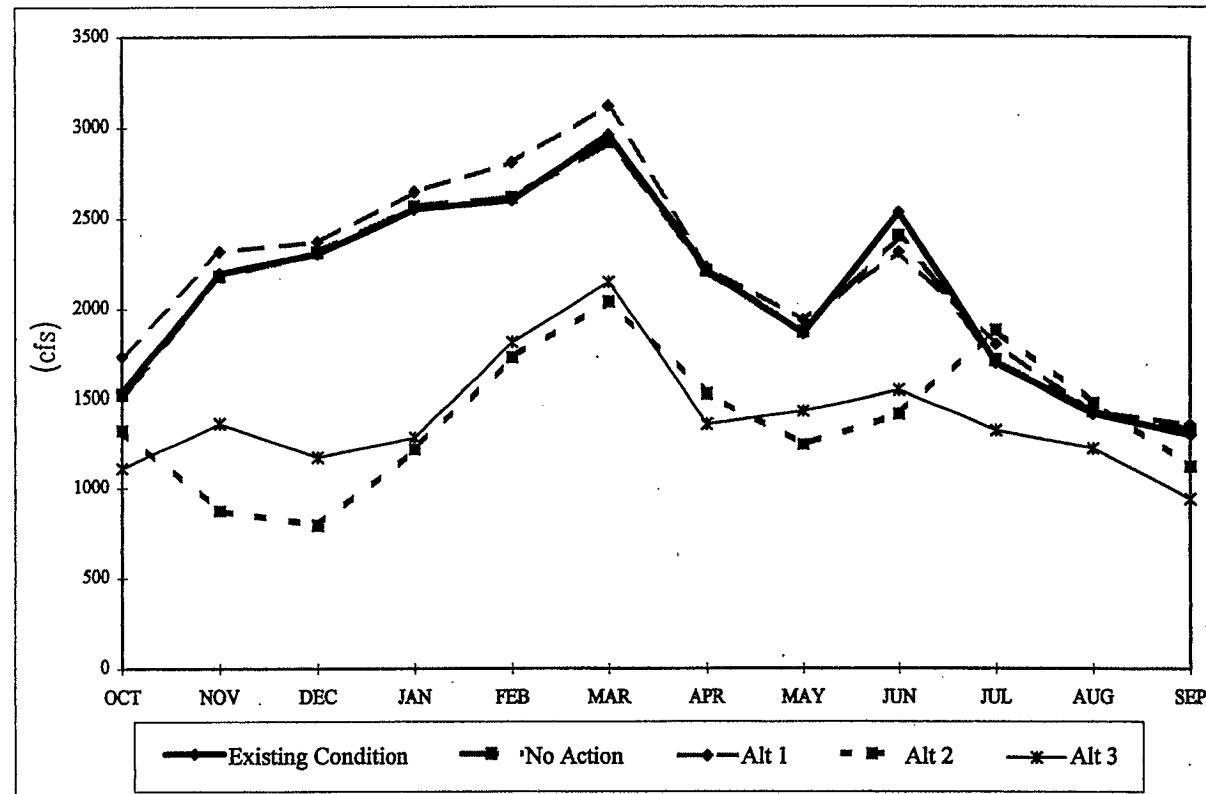


Case	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	SUMMARY	Case Description
Existing Condition	6561.4	10881.3	11451.9	14505.7	15012.8	19403.7	10846.9	7339.8	12356.7	7228.3	5278.7	4285.7	10429.4	Existing Condition
No Action	6405.4	10728.6	11235.1	14554.7	15223.7	19328.7	11004.6	7884.9	10904.7	7024.6	5203.1	4359.8	10321.5	No Action
Alt 1	7845.1	11657.7	11302.9	15074.2	16843.1	21107.8	11122.0	8447.7	10368.7	7906.8	5151.4	4427.0	10937.9	Alt 1
Alt 2	4101.9	5624.6	4692.7	7778.1	10845.8	14084.1	8283.4	6149.3	6741.3	5946.7	3866.6	2539.3	6721.1	Alt 2
Alt 3	5161.1	6697.0	5185.0	6350.2	9536.4	13140.3	6550.6	6080.3	6837.4	3909.9	3617.2	3607.0	6389.4	Alt 3

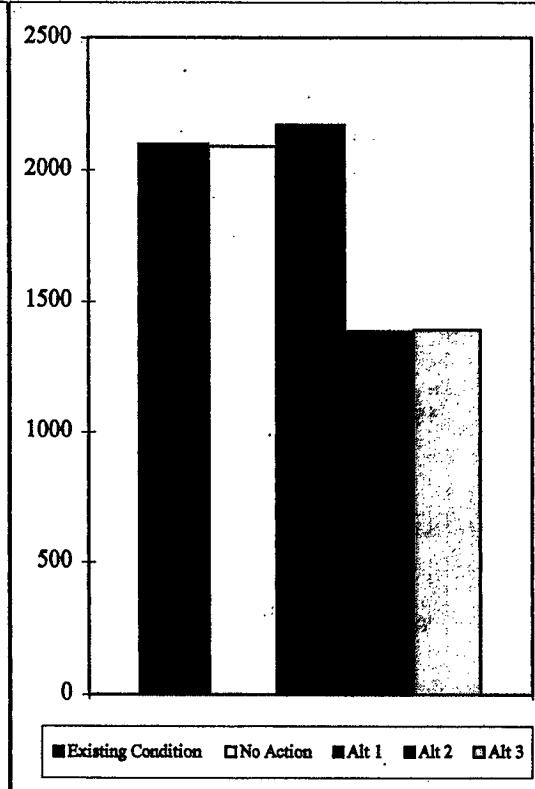
**Comparison of Georgiana Slough Under Various Delta Alternatives**

Data Selected from WYear1975 thru 1991 & 4<=WYType<=5

**Average Monthly Values**



**Average Annual Average Values**



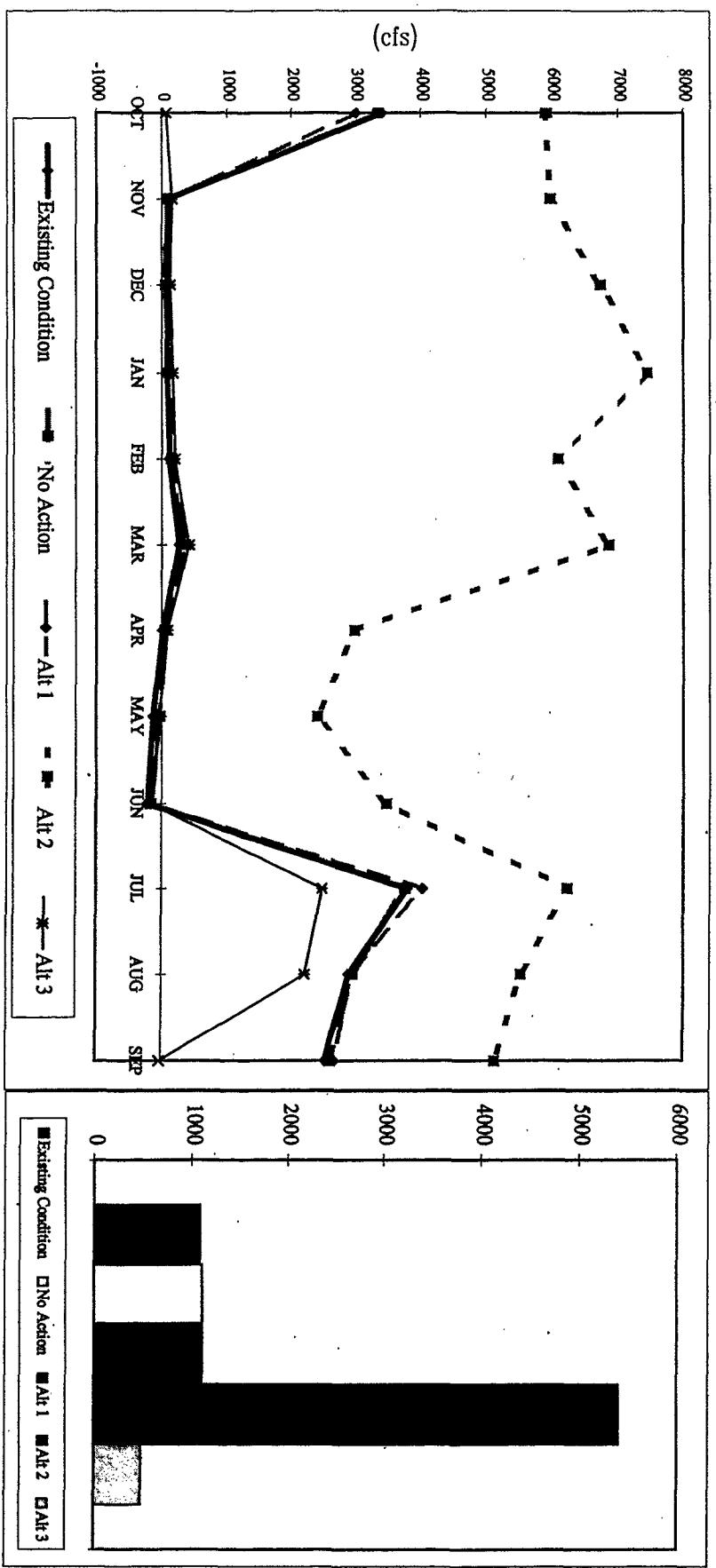
Case	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	SUMMARY	Case Description
Existing Condition	1536.8	2196.8	2304.4	2551.9	2602.4	2962.3	2211.1	1864.0	2532.1	1699.4	1414.4	1298.6	2097.9	Existing Condition
No Action	1524.3	2179.1	2311.9	2567.8	2615.8	2919.7	2207.9	1871.2	2402.1	1712.6	1426.7	1326.3	2088.8	No Action
Alt 1	1735.7	2316.1	2370.4	2647.7	2810.3	3120.2	2227.8	1937.2	2311.7	1802.6	1422.9	1353.7	2171.4	Alt 1
Alt 2	1326.2	872.7	790.9	1217.9	1730.1	2040.2	1526.4	1241.8	1411.7	1880.9	1477.1	1120.7	1386.4	Alt 2
Alt 3	1112.8	1360.6	1170.9	1282.7	1815.7	2148.4	1355.9	1428.7	1545.6	1321.0	1218.8	938.0	1391.6	Alt 3

## Comparison of North Mokelumne Under Various Delta Alternatives

Data Selected from WYear1975 thru 1991 & 4=<WYType<=5

### Average Monthly Values

### Average Annual Average Values

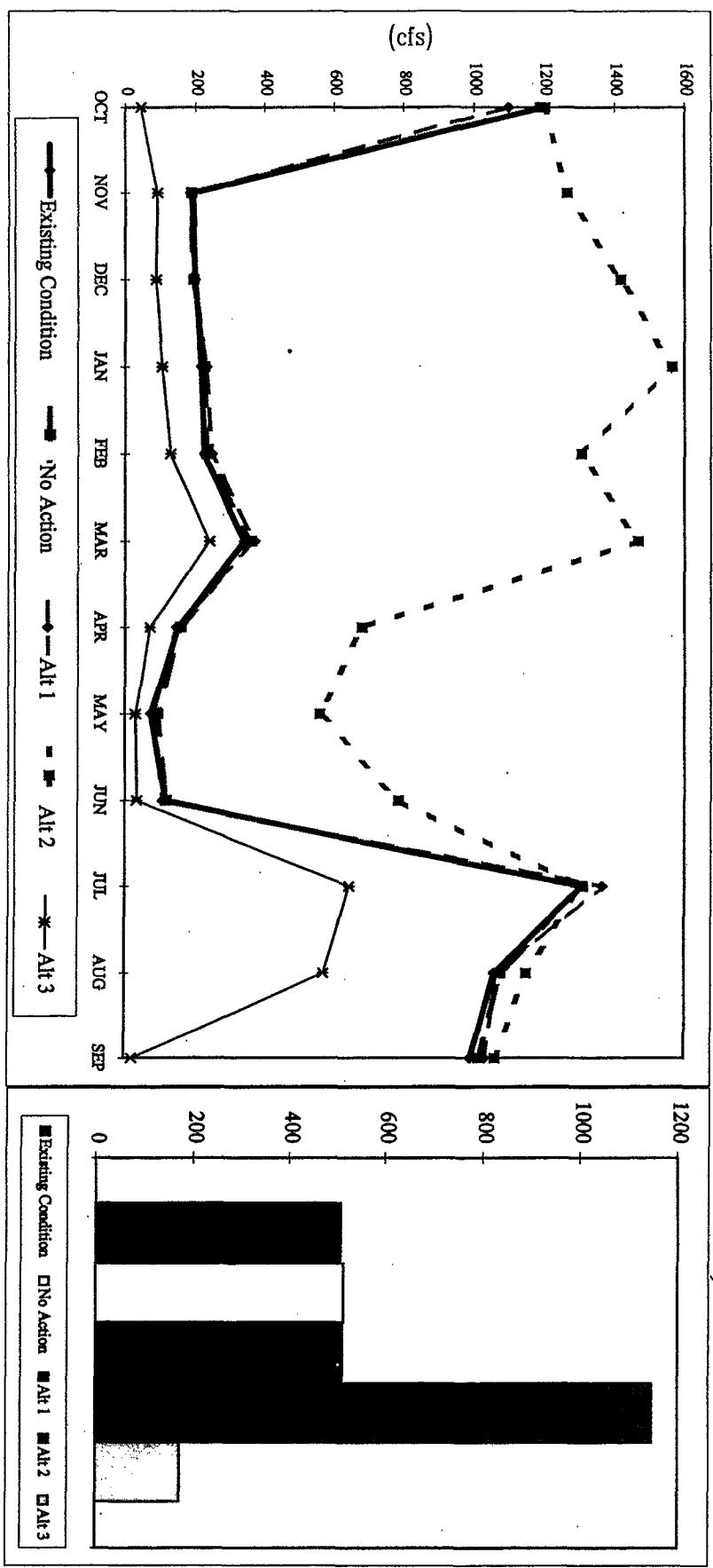


**Comparison of S Mok@ New Hope Tract Under Various Delta Alternatives**

Data Selected from WYear1975 thru 1991 & 4<=WYType<=5

Average Monthly Values

Average Annual Average Values

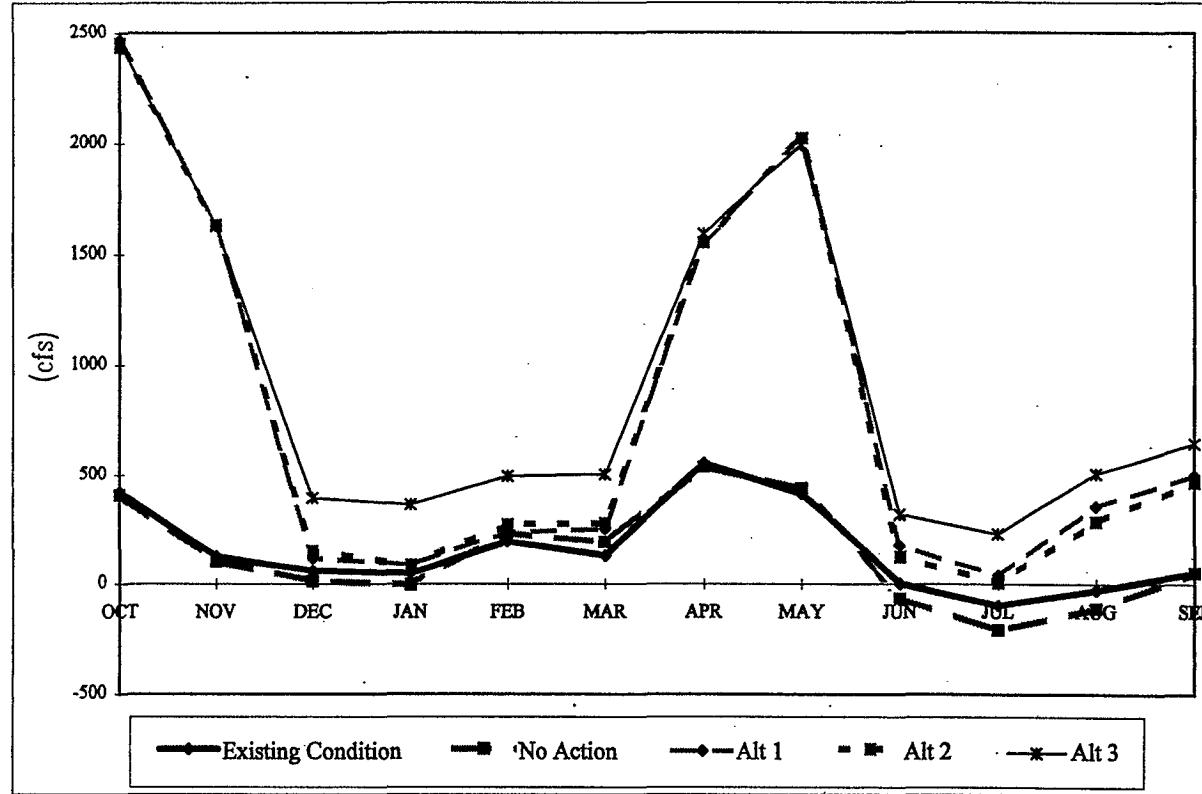


Case	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	SUMMARY	Case Description
Existing Condition	1203.0	192.6	199.0	216.8	224.9	340.7	151.6	73.7	115.1	1307.4	1057.9	991.8	506.2	Existing Condition
No Action	1189.3	188.0	193.9	226.1	231.9	359.4	157.2	92.7	116.2	1309.7	1075.9	1015.0	512.9	No Action
Alt 1	1097.9	185.8	196.9	231.9	246.7	371.6	146.9	79.9	107.2	1366.1	1063.9	1032.9	510.6	Alt 1
Alt 2	1202.2	1265.0	1418.8	1565.4	1306.4	1467.2	680.4	560.7	785.7	1304.8	1149.7	1062.4	1147.4	Alt 2
Alt 3	43.7	92.0	88.6	105.8	128.8	240.7	71.6	30.0	33.3	644.4	570.8	22.3	172.7	Alt 3

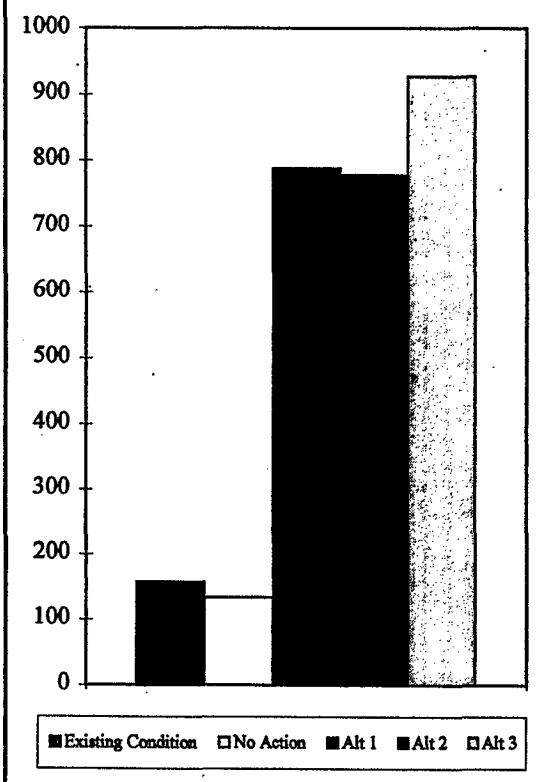
**Comparison of SJR@Brandt Brdg Under Various Delta Alternatives**

Data Selected from WYear1975 thru 1991 & 4<=WYType<=5

**Average Monthly Values**



**Average Annual Average Values**

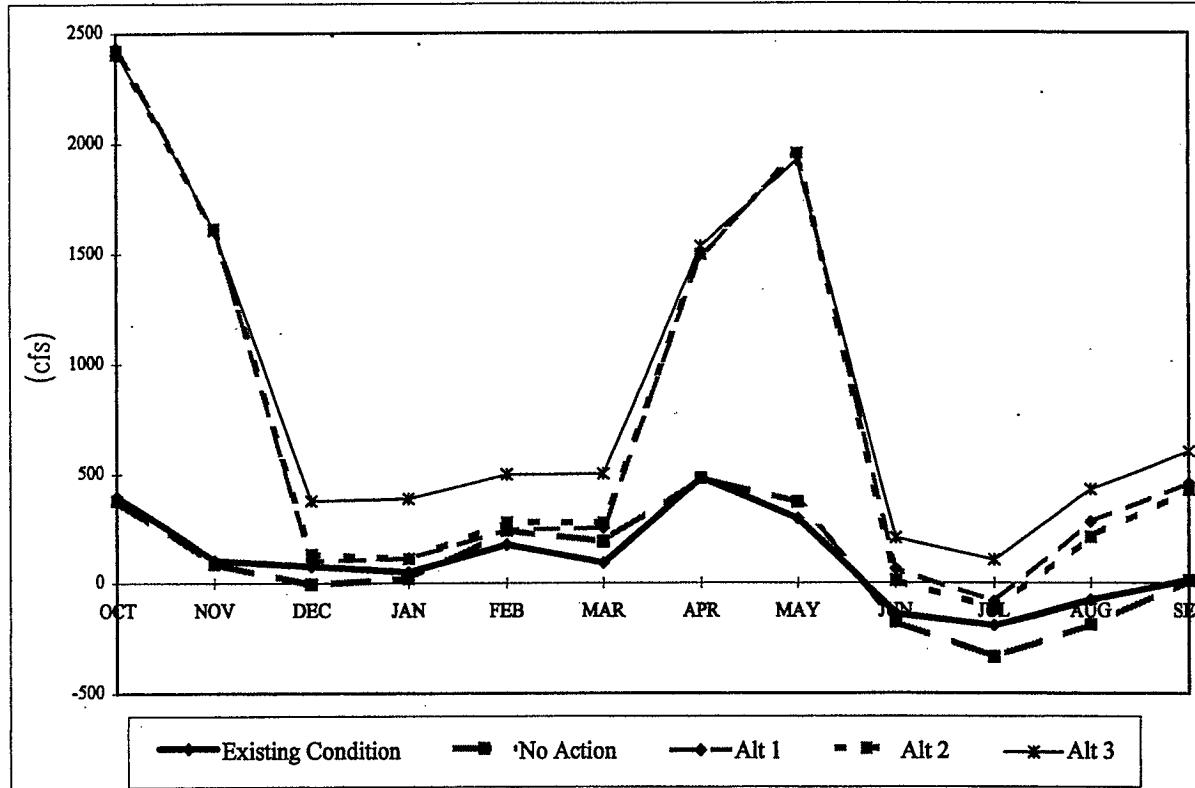


Case	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	SUMMARY	Case Description
Existing Condition	423.0	126.6	60.7	49.8	194.8	131.3	555.2	413.7	1.1	-98.2	-27.1	50.8	156.8	Existing Condition
No Action	408.8	103.6	13.2	-3.0	234.3	191.3	535.6	436.9	-64.9	-211.3	-113.0	51.3	131.9	No Action
Alt 1	2467.6	1631.8	119.4	89.4	238.9	252.7	1552.6	2020.6	175.4	38.6	356.2	499.6	786.9	Alt 1
Alt 2	2437.0	1633.2	151.2	88.0	272.9	278.8	1554.4	2022.6	125.4	6.3	286.7	467.6	777.0	Alt 2
Alt 3	2454.0	1630.0	395.8	364.2	494.3	503.4	1592.5	1990.7	318.3	229.1	506.2	645.4	927.0	Alt 3

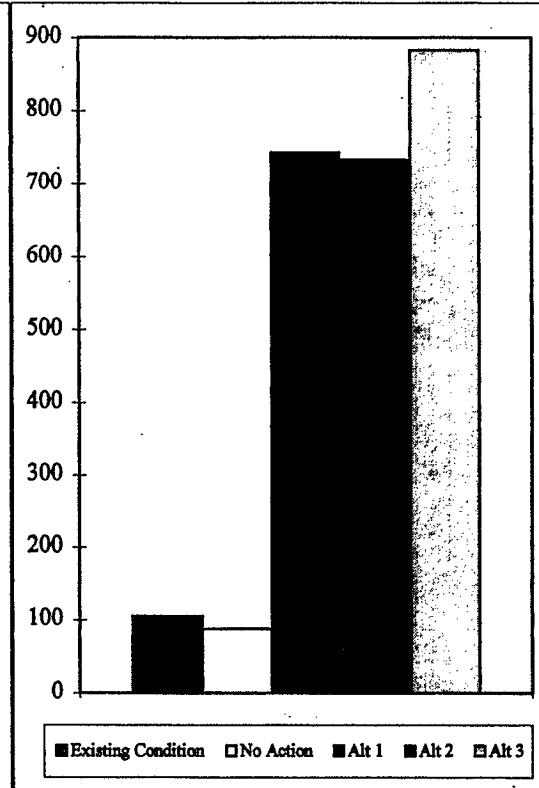
**Comparison of SJR@Stockton Under Various Delta Alternatives**

**Data Selected from WYear1975 thru 1991 & 4<=WYType<=5**

**Average Monthly Values**



**Average Annual Average Values**



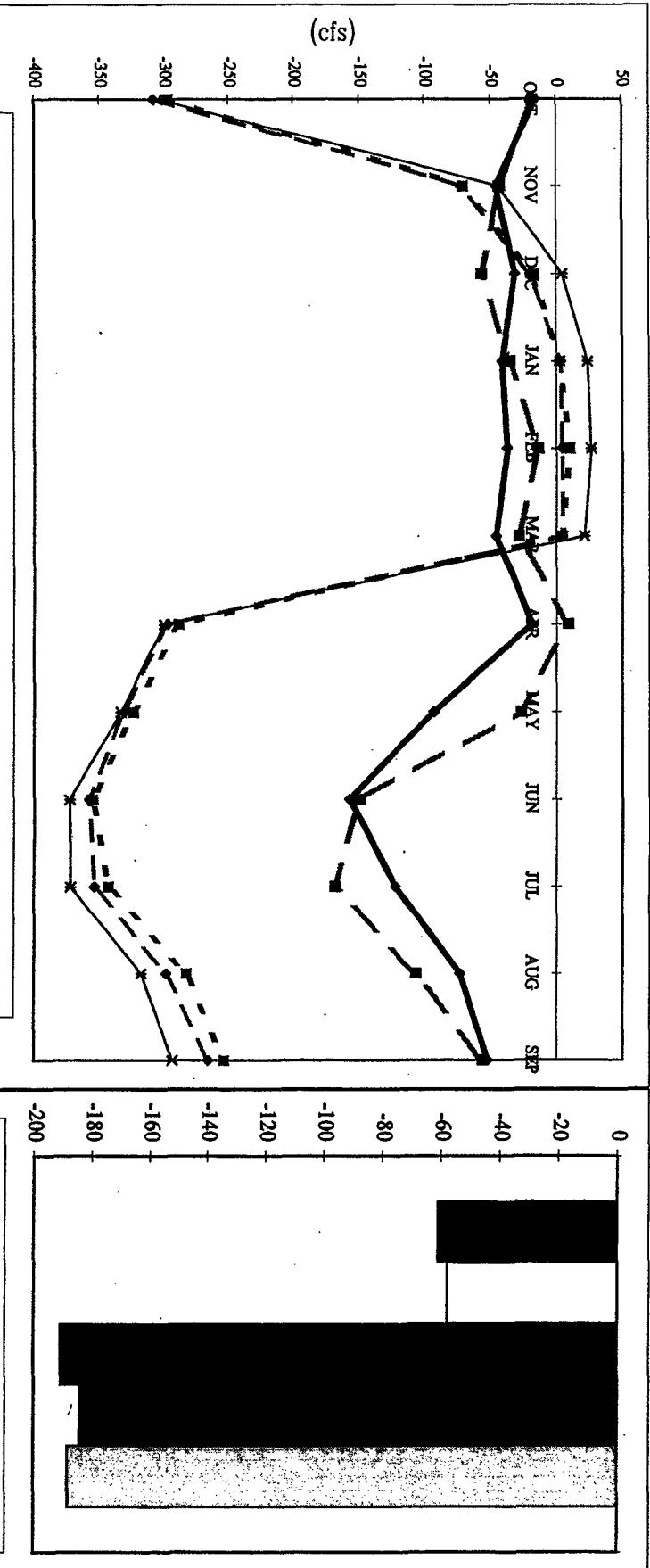
Case	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	SUMMARY	Case Description
Existing Condition	397.4	101.9	74.2	48.6	175.1	89.6	481.7	292.0	-141.2	-194.4	-79.9	14.2	104.9	Existing Condition
No Action	375.9	84.2	-6.7	18.4	237.3	188.1	478.2	367.4	-179.8	-337.0	-191.7	8.1	86.9	No Action
Alt 1	2435.0	1612.3	99.4	110.8	241.7	249.3	1495.2	1951.2	61.0	-86.7	277.4	456.1	741.9	Alt 1
Alt 2	2404.3	1613.8	131.2	109.3	275.7	275.3	1497.2	1953.0	10.8	-119.2	208.1	424.1	732.0	Alt 2
Alt 3	2421.2	1610.6	375.6	385.6	497.2	500.2	1535.2	1921.3	203.3	103.7	427.6	602.1	882.0	Alt 3

**Comparison of Middle R@ Tracy Rd Under Various Delta Alternatives**

Data Selected from WYear1975 thru 1991 & 4<=WYType<=5

Average Monthly Values

Average Annual Average Values



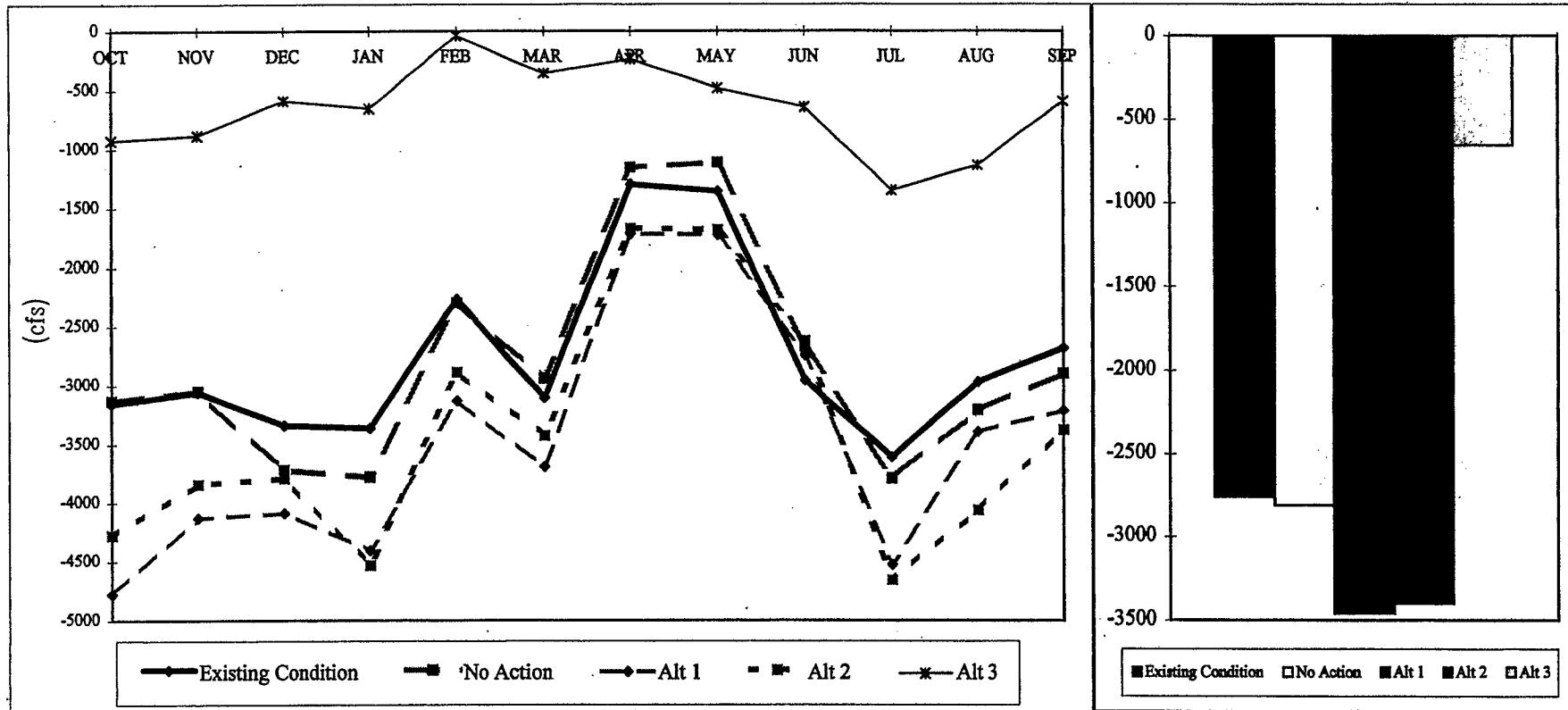
Case	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	SUMMARY
Existing Condition	-15.7	-45.4	-31.2	-41.1	-37.1	-45.8	-18.4	-93.3	-157.7	-122.2	-73.4	-52.6	-61.2
No Action	-18.1	-42.8	-56.9	-35.4	-13.7	-28.6	8.8	-27.1	-150.1	-168.7	-106.9	-56.4	-58.0
Alt 1	-308.1	-72.6	-19.7	3.6	4.4	4.8	-297.5	-331.6	-358.0	-333.6	-298.4	-265.8	-191.0
Alt 2	-296.7	-70.9	-16.7	2.7	10.3	4.7	-288.7	-323.9	-355.2	-342.8	-282.8	-253.4	-184.4
Alt 3	-304.6	-43.7	23.8	26.8	21.4	-300.2	-333.4	-373.0	-372.1	-317.7	-293.6	-188.5	Alt 3

**Comparison of Middle R@Bacon Under Various Delta Alternatives**

Data Selected from WYear1975 thru 1991 & 4<=WYType<=5

**Average Monthly Values**

**Average Annual Average Values**

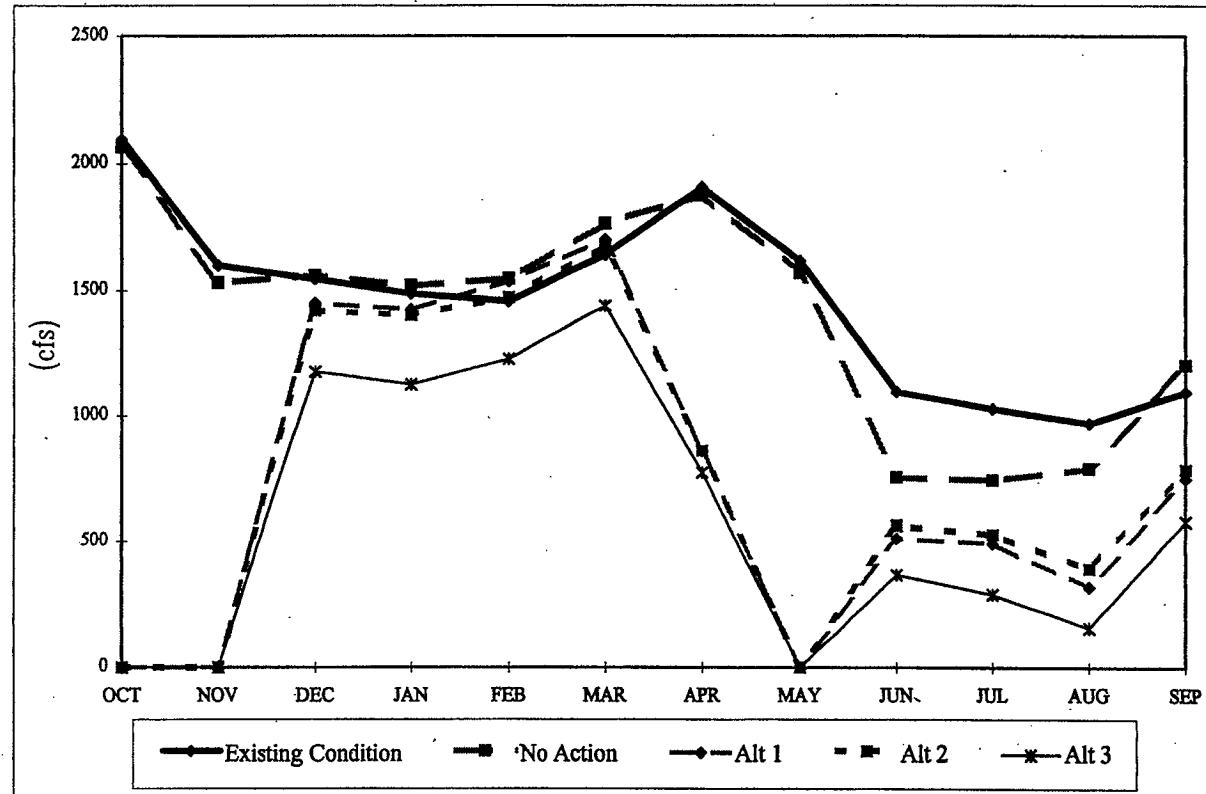


Case	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	SUMMARY	Case Description
Existing Condition	-3157.7	-3057.1	-3335.2	-3359.2	-2266.8	-3102.2	-1294.9	-1355.8	-2956.8	-3609.0	-2969.8	-2684.9	-2762.4	Existing Condition
No Action	-3130.6	-3049.4	-3717.6	-3779.0	-2298.6	-2940.9	-1154.6	-1114.7	-2674.6	-3791.3	-3210.4	-2899.6	-2813.4	No Action
Alt 1	-4777.2	-4130.1	-4087.7	-4405.4	-3130.3	-3692.2	-1718.1	-1723.6	-2743.6	-4527.2	-3393.8	-3214.2	-3461.9	Alt 1
Alt 2	-4275.7	-3839.1	-3787.4	-4533.2	-2887.2	-3425.0	-1671.8	-1683.0	-2623.7	-4657.4	-4063.3	-3375.9	-3401.9	Alt 2
Alt 3	-926.3	-884.7	-589.7	-655.7	-35.3	-356.1	-233.5	-482.2	-647.0	-1349.8	-1136.8	-596.1	-657.8	Alt 3

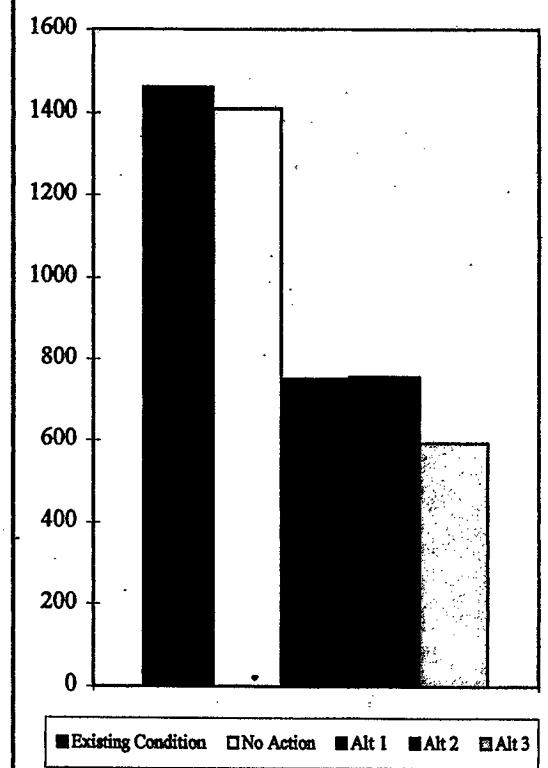
**Comparison of Old R@Head Under Various Delta Alternatives**

Data Selected from WYear1975 thru 1991 & 4<=WYType<=5

**Average Monthly Values**



**Average Annual Average Values**



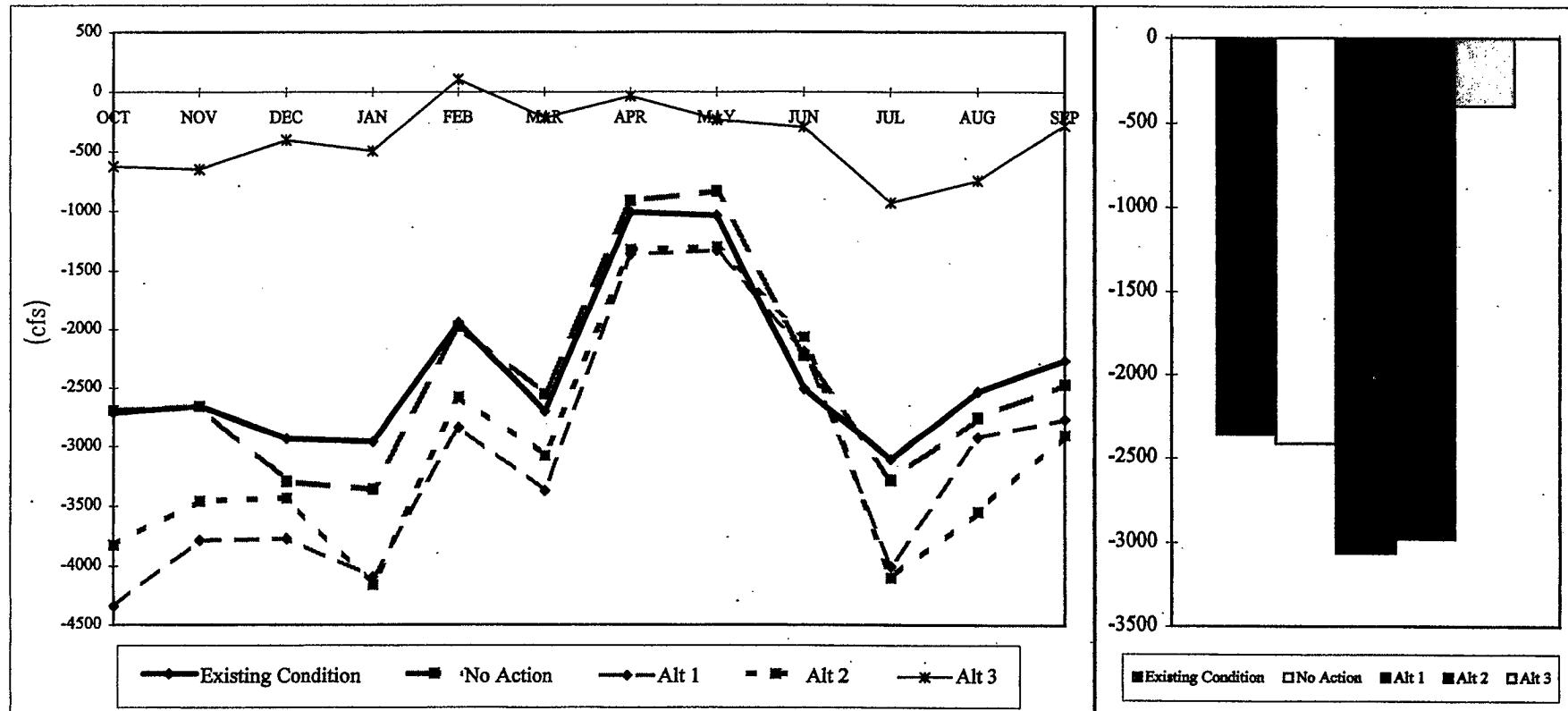
Case	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	SUMMARY	Case Description
Existing Condition	2092.9	1600.6	1545.4	1487.4	1456.7	1642.7	1905.8	1616.9	1095.0	1026.7	968.3	1095.7	1461.2	Existing Condition
No Action	2063.0	1530.3	1558.0	1519.0	1546.2	1763.8	1876.1	1568.9	752.0	740.7	787.7	1201.3	1408.9	No Action
Alt 1	0.0	0.0	1449.2	1424.4	1537.3	1700.3	858.1	0.0	510.6	490.1	317.6	747.6	752.9	Alt 1
Alt 2	0.0	0.0	1420.4	1400.7	1472.0	1673.3	858.8	0.0	561.7	526.2	390.4	783.7	757.3	Alt 2
Alt 3	0.0	0.0	1174.8	1123.8	1225.7	1438.3	771.8	0.0	365.6	287.8	155.7	577.7	593.4	Alt 3

**Comparison of OLD R@ Bacon Is Under Various Delta Alternatives**

Data Selected from WYear1975 thru 1991 & 4<=WYType<=5

**Average Monthly Values**

**Average Annual Average Values**

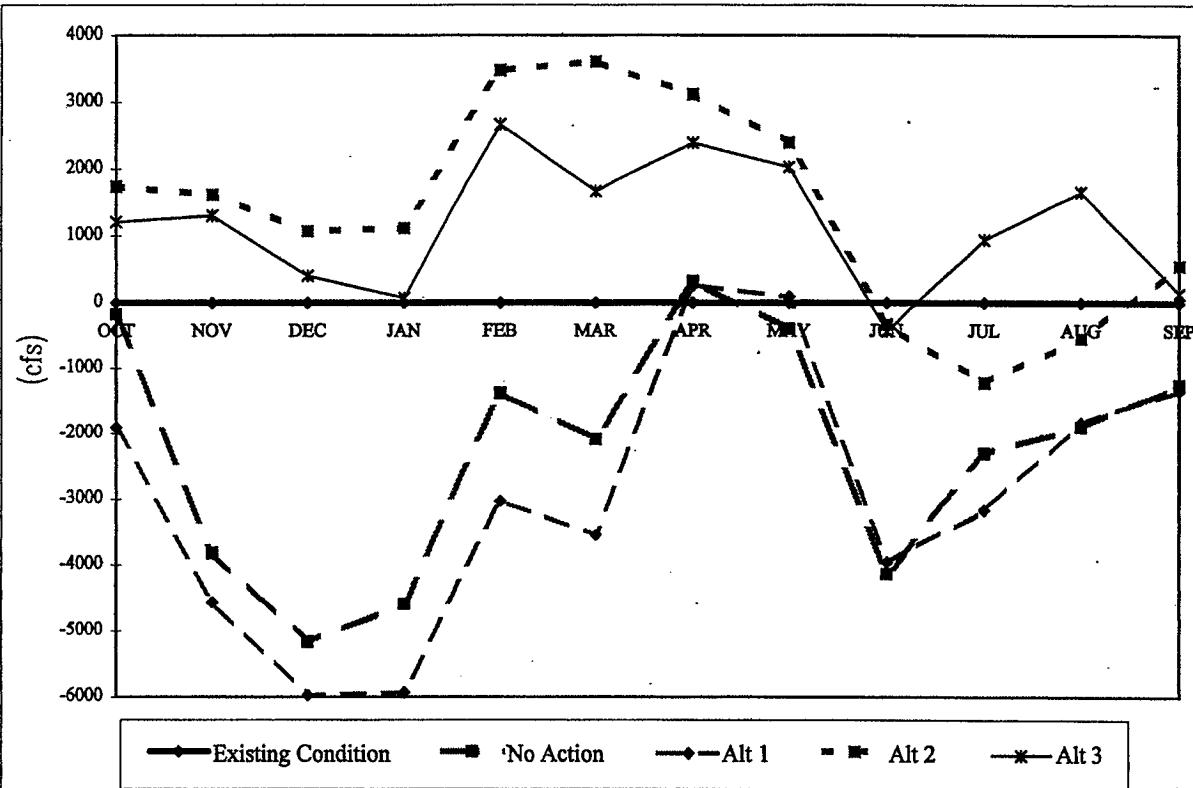


Case	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	SUMMARY	Case Description
Existing Condition	-2714.7	-2655.3	-2933.4	-2960.0	-1943.8	-2701.3	-1009.7	-1039.2	-2509.9	-3107.6	-2533.9	-2260.4	-2364.1	Existing Condition
No Action	-2693.8	-2658.3	-3293.0	-3357.9	-1976.8	-2555.9	-912.2	-831.3	-2225.2	-3281.3	-2754.9	-2470.4	-2417.6	No Action
Alt 1	-4339.2	-3785.0	-3771.7	-4091.7	-2838.7	-3372.3	-1365.2	-1334.9	-2190.3	-4006.3	-2922.7	-2764.8	-3065.2	Alt 1
Alt 2	-3824.7	-3458.9	-3432.3	-4157.9	-2578.9	-3075.3	-1322.8	-1300.1	-2064.0	-4101.0	-3544.4	-2902.3	-2980.2	Alt 2
Alt 3	-623.1	-648.1	-403.3	-495.7	105.7	-216.7	-35.1	-231.3	-294.0	-929.3	-742.2	-280.2	-399.5	Alt 3

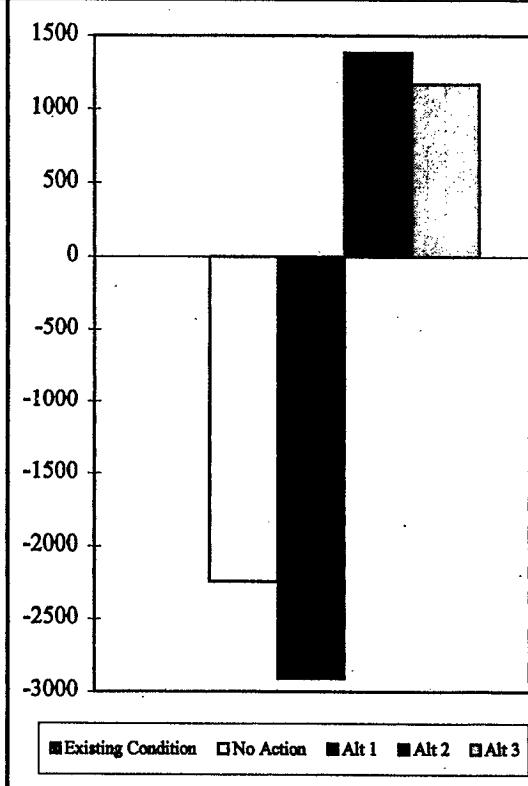
### Comparison of Qwest Under Various Delta Alternatives

Data Selected from WYear1975 thru 1991 & 4<=WYType<=5

Average Monthly Values



Average Annual Average Values

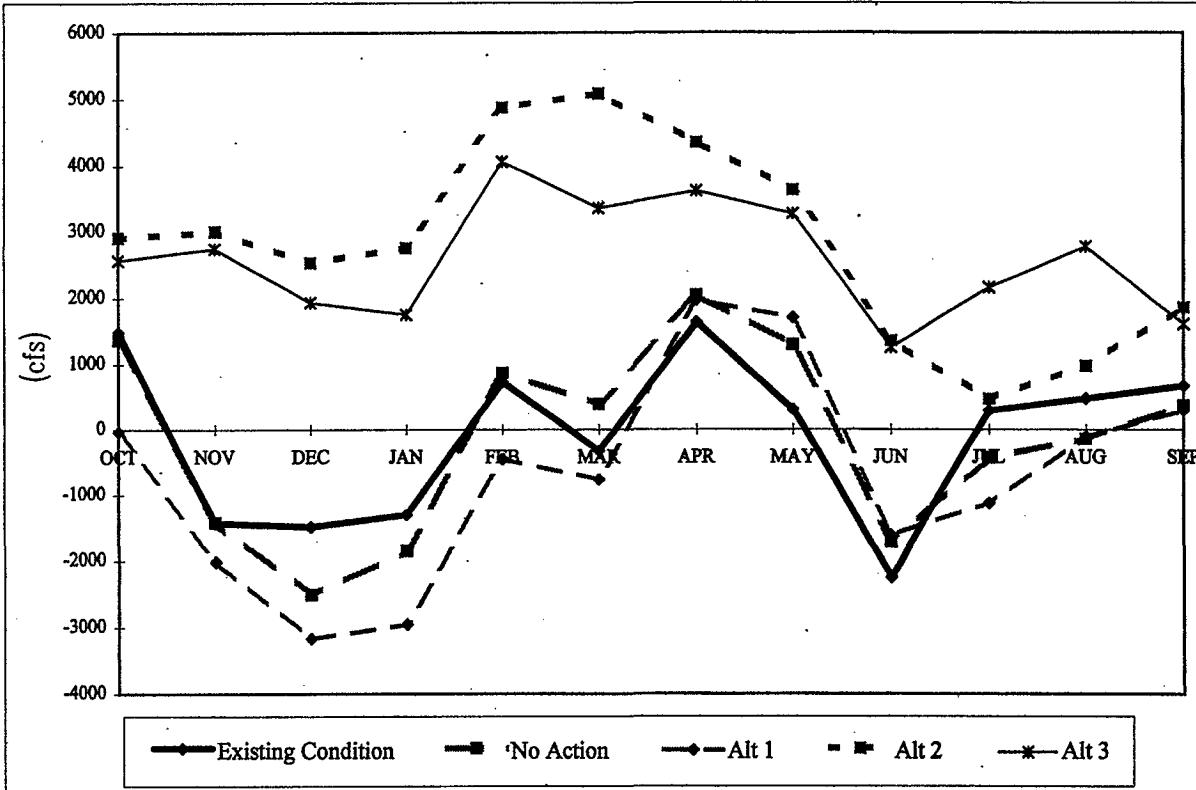


Case	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	SUMMARY	Case Description
Existing Condition	#DIV/0!	Existing Condition												
No Action	-175.7	-3826.1	-5170.9	-4601.7	-1380.3	-2088.0	314.4	-393.3	-4141.0	-2302.0	-1894.3	-1255.8	-2242.9	No Action
Alt 1	-1904.4	-4569.7	-5968.9	-5934.4	-3035.9	-3550.6	260.3	88.4	-3953.4	-3170.1	-1834.1	-1332.1	-2908.7	Alt 1
Alt 2	1735.6	1614.1	1074.3	1117.3	3481.3	3606.6	3120.5	2394.1	-327.9	-1219.6	-541.8	557.4	1384.3	Alt 2
Alt 3	1211.6	1301.8	398.6	70.4	2667.9	1666.8	2390.7	2028.2	-435.2	937.7	1656.1	140.2	1169.6	Alt 3

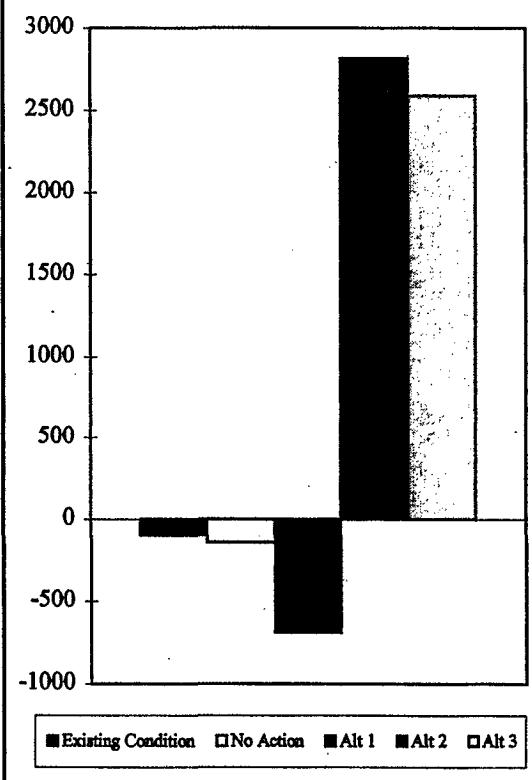
**Comparison of SJR@Antioch Under Various Delta Alternatives**

Data Selected from WYear1975 thru 1991 & 4<=WYType<=5

**Average Monthly Values**



**Average Annual Average Values**



Case	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	SUMMARY	Case Description
Existing Condition	1484.1	-1432.0	-1484.2	-1301.8	723.3	-328.1	1628.8	305.4	-2250.3	289.6	476.4	664.1	-102.1	Existing Condition
No Action	1361.6	-1420.2	-2505.6	-1850.8	862.9	390.6	2033.8	1293.0	-1716.7	-432.8	-141.9	372.6	-146.1	No Action
Alt 1	-34.2	-2015.6	-3168.9	-2951.1	-452.7	-770.2	1965.7	1698.3	-1612.3	-1128.7	-113.6	293.2	-690.8	Alt 1
Alt 2	2910.1	3003.9	2534.0	2756.7	4874.2	5084.9	4348.9	3630.0	1352.7	473.3	975.0	1859.4	2816.9	Alt 2
Alt 3	2569.4	2745.7	1929.0	1746.7	4058.4	3356.9	3616.1	3268.8	1246.9	2153.1	2772.6	1607.9	2589.3	Alt 3

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